

**FIRST NEWS • FIRST REVIEWS • BEST BUYS • YOUR WEEKLY GUIDE**

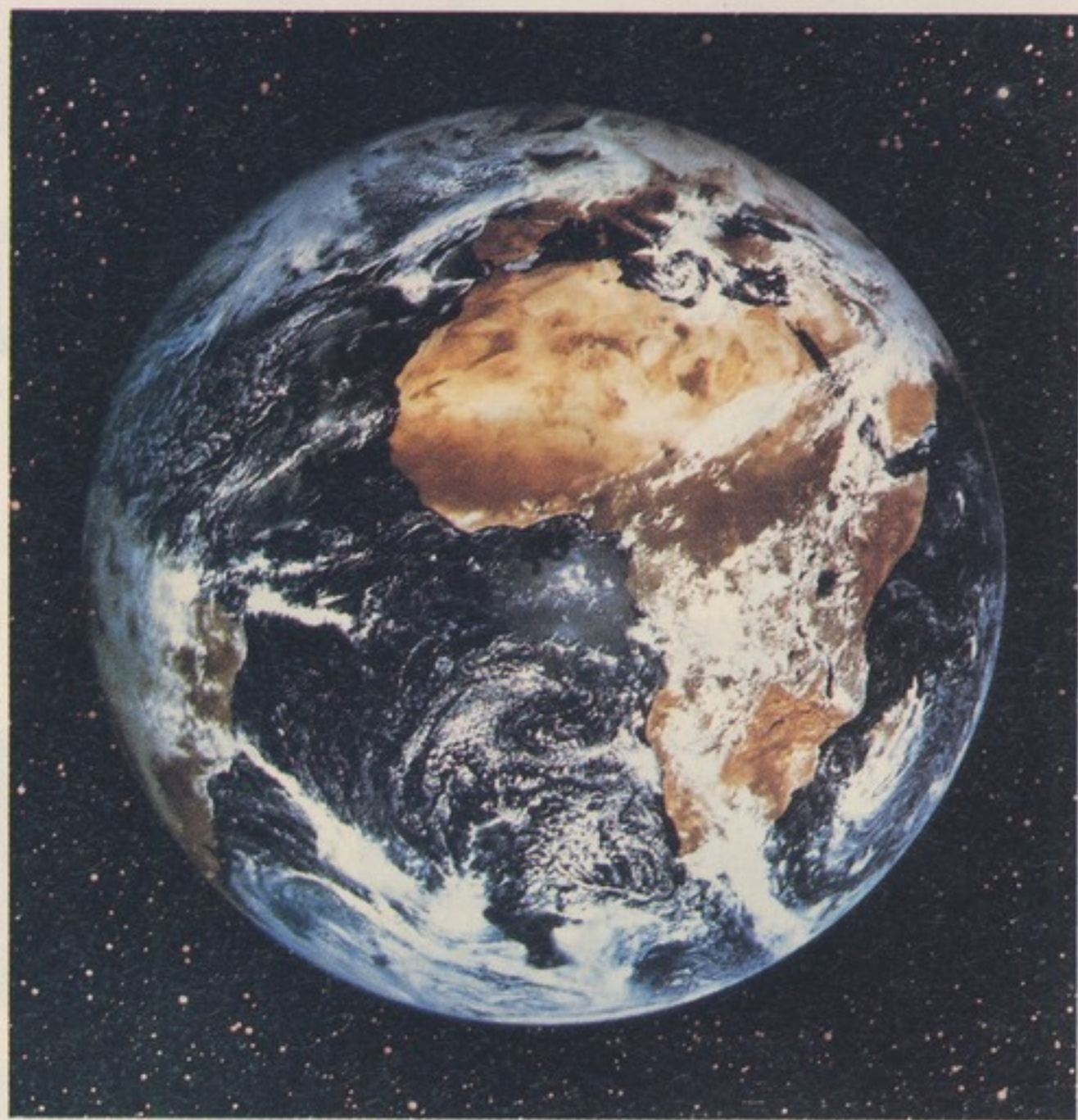
[illegible]



# frontend

edited by Colin Campbell

## Create your own 3D landscape



### COMING DOWN TO EARTH

This is planet Earth. If someone told you that a computer manufacturer is attempting to re-create the entire weather patterns of this complex entity, you would expect them to stumble across a few problems. You would of course be absolutely correct.

American supercomputer manufacturer Cray has been forced to delay its world model computer which was to be shipped out to the planet's weather forecasters any time now. The machine, when it finally arrives, will help meteorologists accurately predict the weather six days before it happens (instead of the usual four or five).

The computer model consists of 62,496 points over Earth situated at 75Km intervals. It should be able to calculate weather patterns four times faster than the relatively primitive machines currently in use. Millions of snippets of information will be fed in every day from 134 countries around the world.

But Cray has already had to scrap an initial effort because it didn't work. And the new version is said to be a tad "unstable". Apparently, when it detects a depression it starts predicting a fully fledged storm, instead of a few hours drizzle.

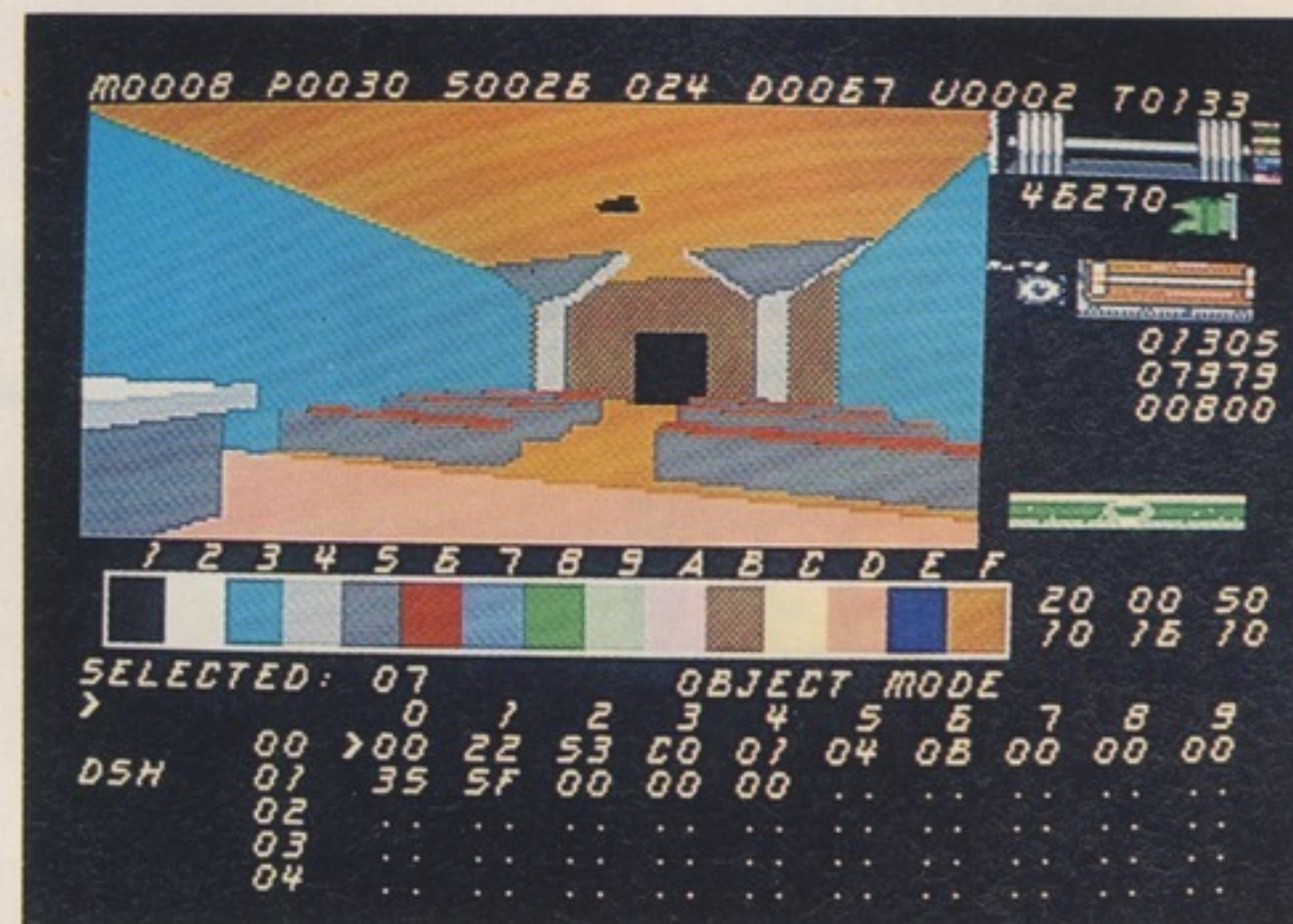
But Cray is confidently predicting that the machine will be ready early next year - just in time for the really lousy weather. ■

### Watch your grammar

If you wish you could write proper like what we do here, then Grammatik IV, the latest launch from DLL, is the program for you.

Americans bought \$10 million worth of the program last year and DLL now feels ready to launch a British version at a retail price of £79.95.

Working like a spelling checker the program runs directly on files created by all the major word processors. It can find thousands of errors, let the user choose from six writing style options and compare writing styles to standards or corporate styles. Users can even add their own rules. Thinking it was perhaps something we could do with, we put it to the test - Turn to page 74 to see how it made out. ■



A program which will enable you to create your own three-dimensional computer environments is to be launched by games publisher Domark.

The 3D Construction Kit is based on Incentive's widely acclaimed Freespace environment, which was utilised to splendid effect in *Driller*, *Dark Side* and the more recent *Castle Master* (pictured).

But the rigid dimensions of normal gameplay have nothing to do with

this software. In effect it's an interactive art package in which you can create any surrounding (perhaps a futuristic city, a woodland or underground maze) complete with characters or objects which you can animate.

A spokesman for Domark said: "The limits are set only by your imagination." It will be launched on the ST, Amiga, Spectrum, CPC and C64 in the spring. Prices have yet to be decided. ■

## A little extra bite



There are some games that you can really get your teeth into, but this lovely young lady seems to have become just a bit too involved in the latest offering from Gonzo games - *The Brides of Dracula*.

Due for release in November, the game has been officially endorsed by the Transylvanian State Tourist Board.

The Romanian Embassy is currently keen on promoting Transylvania as a tourist area, which must be a bit of an uphill struggle at best.

The game, which is described as a "comedy bite-em up", was designed, according to Gonzo's Paul Smith, to "inject a little humour into a well known concept like Dracula". ■

● A recent survey in *Young Telegraph* revealed that the second most popular pastime amongst boys aged 8 to 12 is playing computer games. Unsurprisingly, football came tops, but watching television was pushed back to third place.

● Another area of the job market is about to be invaded by computers. Human tasting experts who try out new artificial flavours could find themselves

made redundant by a computer which has been developed at the University of California - it can tell how bitter or sweet a chemical is.

● With a price cut of £50 on all its VGA model monitors, Philips claims that the 3CM9609 is the first colour VGA - now at £299.99 - to break the £300 price barrier. The company is also reducing Super VGA monitors by £100.

### Olympia goes high tech

Quite a few people were just a trifle miffed when Atlanta, Georgia, USA, was selected to stage the 1996 Olympic Games. Some complained of financial muscle flexing and outrageous commercialism. But few could quibble with the city's impressive presentation at the final decision conference in Tokyo.

This animation of a computer generated athlete was central in the high-tech multimedia presentation which wowed attendants. It was developed at the Georgia Institute of Technology using graphics merged with real images shot on film by Academy Award nominated cinematographers.

Classical music used in the presentation was composed and generated on an Amiga and the whole thing was polished with the aid of a Macintosh. ■





# KONIX CRUNCH



Hopes were fading last week for the future of the Multisystem games console as Konix, its British manufacturer, slipped into administrative receivership.

The company's debts are understood to be as high as £1million. The receiver, Peat Marwick McLintock, is hoping to sell the company to a major player in the computer entertainment industry. A well established manufacturer is the undeniable preference although, with most of the big names already committed to their own games consoles, the likelihood of a Commodore, Amstrad or Atari buy-out is minimal.

The Multisystem was welcomed rapturously early last year when it was first shown to the trade and press. However, by the time of the 1989 PC Show, problems became apparent as Konix failed to

present the machine to the public. Interest has faded ever since. Before embarking on the ambitious Multisystem project Konix was regarded as a highly successful manufacturer of quality joysticks. There can be no doubt that the machine has entirely drained the company.

It had originally been pitched as an arcade machine for the home. The graphics were as good as those of an Amiga and it featured a selection of ingenious control yokes designed to complement racing, driving and flying games. Konix was even going to offer an Afterburner style arcade chair for the £200 machine.

Gamers must now hope a company with a great deal of money and confidence steps in to save the machine which was once touted as "the future of home entertainment". ■

## Dangers of computing

Yet another doom-laden theory has been put forward concerning the allegedly terrible risks of computer use.

According to "electronics expert" Roger Coghill, computer monitors could be responsible for causing cancer, multiple sclerosis and even AIDS.

In his new book *Electropollution* he claims that radiation emitted from monitors weakens those parts of the brain which control the immune system. He says computers interfere with the development of the blood cells which destroy alien viruses.

"There is a very real danger from sitting in front of a computer screen for long periods," says Coghill. "The only means of protection is to use gas plasma screens and very low frequency screens."

Coghill also thinks cot deaths are due to normal household electrical appliances damaging babies' brains, and he says the increased incidence of cancer this century has something to do with electrical wiring in houses.

He goes on to claim: "A whole new order of mysterious diseases, including Yuppie Flu, Multiple Schlerosis and AIDS, has arisen, none of which can be linked to any particular virus, but all of which have distinct similarities to electro-magnetically engendered disorders."

• Current medical thinking does not subscribe to these theories, and no definite link has been found between any ailment and computer screen radiation. Is it possible that we are simply ignorant of the dangers of computing? Or is it inevitable that such machines will attract alarmist theories. What do you think? Drop us a line at the usual address. ■

## Introducing Robopanda

You've seen the trailer at your local cinema. The one where the looters spectacularly blow up an approaching police car, just before a gleamingly resplendent Robocop fearlessly steps out to blast away everything in sight.



Well, it seems that the British police force is going to join the computer age, but it's not the boys in blue who are due for an overhaul – it's the good old panda car.

Speaking at the recent Police Constables' Conference, top cop Charles Kelly predicted that law enforcement vehicles of the future will be fitted with computers, electronic notebooks and sophisticated communications equipment, allowing officers to deliver reports without leaving their cars.

Traditional police stations will become redundant as officers start and finish their day at their homes. And an automatic vehicle location system will keep track of police cars at all times.

He went on to predict that car-to-car transmissions by voice and computer screen will be used to give and receive information, freeing policemen from the tons of paperwork which takes all the fun out of their jobs. ■

# CONTENTS

## FEATURES

### Super-charging your Amiga

What factors should you take into account when upgrading your Amiga? – page 14

### Sampling the synths

The best low-cost machines for your home MIDI recording studio – page 69

## REVIEWS

### Sounding out the competition?

Does AVR's Pro-Series 12 sampler for the ST deliver the best sound yet? – page 73

### Rite it proper like

A round-up of style and grammar checkers for your PC – page 74

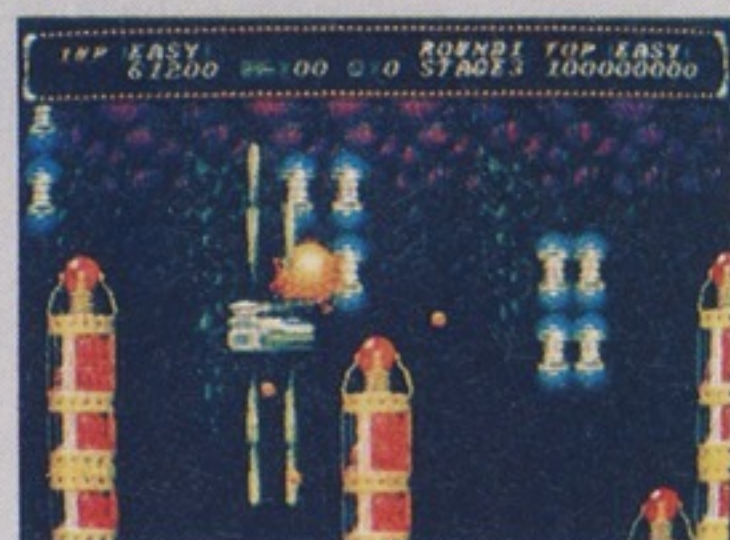
## EVERY WEEK

### Games Week

News, reviews and tips – page 65

### The Console Zone

Playing tips for your console faves and news of soundtrack CDs – page 66



### Get Wagging!!

... £500 of joysticks up for grabs – page 78

### News

4-9

### Opinion

10

### Letters

12

## SHOPPING EXPRESS

<b>Amiga</b>	<b>18</b>	<b>PC</b>	<b>23</b>
		<b>Spectrum</b>	<b>24</b>
		<b>ST</b>	<b>25</b>
		<b>Macintosh</b>	<b>27</b>
		<b>Wired World</b>	<b>32</b>
		<b>Tech Tips</b>	<b>35</b>
		<b>Centrefold</b>	<b>36</b>
		<b>On-line</b>	<b>56</b>
<b>Archimedes</b>	<b>19</b>	<b>Circuit City</b>	<b>60</b>
<b>CPC</b>	<b>20</b>	<b>PD Column</b>	<b>62</b>
<b>C64</b>	<b>22</b>		

• Smiling her way to your ST



# Other New Apple Products?

Apple has a firm policy of never commenting on future product developments, remaining almost as tight-lipped in the face of speculation as Amstrad. One clear direction in which Apple may choose to move in the near future, however, is into the portable market – a growing sector which is dominated by IBM PC compatible machines.

The launch of Apple's portable last year was greeted with significant interest, but the machine itself turned out to be more of a luggable than a true portable. The price of the Apple portable is also pitched at a level that many people may have made the decision of buying between a portable or a desktop Mac, rather than a portable to supplement their deskbound



• The Outbound laptop. Will this become the next Apple portable?

machine.

Apple's Chairman, John Sculley, has already publicly stated that Apple is currently developing notebook-sized computers. "Miniaturisation," he said, "is one of the major themes we are focusing on in research and development. I think that's going to be extremely important in the 1990s".

Apparently acknowledging criticism about Apple's failure to come up with a lightweight portable, Sculley went on to tell Associated Press that Apple "can do a lot more than just catch up. We see this as a chance to get real differentiation in the 1990s."

Rumours suggest that Apple may be considering partnerships with Japanese electronics companies in an attempt to develop cheaper products – and Sony may well be negotiating with Apple to develop a new laptop.

Another partnership may well be in the offing for Apple – with American manufacturer Outbound Systems.

Outbound launched a laptop computer that offers Mac Plus or SE owners portability in an innovative way. Users remove the ROMs from their Mac, install them in the Outbound Laptop and use it as a portable – which can be 'docked' with the ROM-less host when the user wants the full facilities offered by a desktop machine.

Unusually, Apple has taken no action against Outbound. Indeed, the company appears to have signed but not disclosed the contents of a 'licence agreement' with Outbound Systems. This is an unprecedented move for Apple, which may indicate that it is considering 'adopting' or adapting the Outbound laptop for the official Mac range.

# Busting Windows on the PC

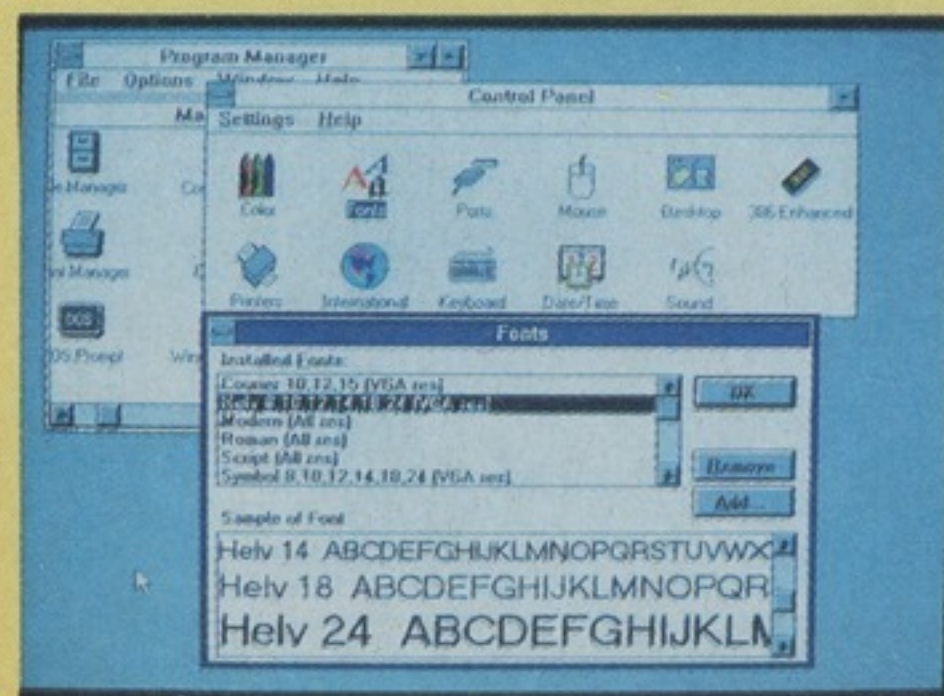
According to the American publication MacWeek, Apple conducted benchmark tests on the Classic and IIsi, pitting them against comparable IBM PC compatibles. Apparently, both Apple machines were shown to outperform PCs from the IBM and Compaq range that profess to offer a similar power-to-price ratio.

The Classic performed 'significantly better' than some PCs, running Windows 3.0 on a 10MHz Intel 80286. Running un-named software packages, the IIsi also outperformed 386-based PCs.

Clearly, Apple is now pitching the Macintosh firmly against the IBM PC and compatibles – the new power-to-price ratio offered by the Classic and IIsi, coupled by the recently announced fall in the price of the Mac IIsi – make the Mac range an attractive and financially viable alternative to the PC.

Previously, the pricing structure for the Mac made it an expensive, if user friendly, option to the PC. The advent of Windows 3.0 allows the PC to offer a more serious challenge to Apple's user-friendly WIMP interface than GEM or earlier versions of Windows. Windows 3.0, combined with continuing delays in Apple's new System 7 operating system, means that Apple is losing some of the edge it gained over the PC with its user interface.

By maintaining high prices, Apple has secured



• Windows 3 has given the PC a Mac-style interface and firmly established WIMPS front-ends as standard.

high margins for itself since the launch of the Macintosh range, but has lost out in terms of sales volume. Currently, Apple has around 9 per cent of the worldwide market for personal computers – a share which the company is very keen to increase.

"The basic goal is to gain market share," Apple Chairman John Sculley explained. "We need to get unit growth up, so we are going to take lower margins."

The price cut may have the desired result in America, where Apple products, like PCs, are sold in the 'open' market place – traders compete on price to attract customers, offering as much as 20 per cent discount.

In the UK and Europe, however, the picture is different and taking lower margins may not have the same impact – Apple only sells through authorised Apple Centres which are effectively Apple franchises. The only price competition comes from so-called 'grey importers' who ship in products from the USA or Canada and undercut Apple's list prices.

Clearly, the Mac and the PC are continuing to move closer together – with Windows, the PC gained a more user-friendly interface, and with the new machines Apple is more able to compete on price with the PC and clone market.

And the move towards a 'common' Mac/PC platform is continuing – all new Macs can now read and write PC format disks, and Apple is working with Microsoft on both TrueType and PostScript-compatible printers that will facilitate the transfer of documents between platforms. Indeed, the recently-announced Standard Entity Rendering Interchange Format (SERIF) will allow users to prepare a document in PageMaker on the PC, then port it to the Mac and complete the design and pagination in XPress.

While it can be argued that it's still tricky to network Macs and PCs together, the fact that major packages such as Wingz, Excel, XPress, and PageMaker are, or soon will be, running as happily on a PC as a Mac, the difference between owning a Mac and a PC will be much smaller – unless System 7 can widen the gap once more.

# Trio of 'affordable' machines join

# SMALL MAC

# Apple shake



• The Mac Plus is no more, but three new machines arrive: the Classic, IIsi and IIsi

Three new members of the Macintosh family were launched by Apple on Monday and the bottom-of-the-range machine, the Mac Plus, was finally discontinued in favour of the Mac Classic. The entry point to the Mac range is now the 1Mb single floppy drive Classic, which has a list price of £660 inc VAT.

The launch, which also introduced the Mac LC and the Mac IIsi, took place simultaneously in several countries and sets Apple on a new course.

The move is seen as a clear indication that Apple intends to go head-on for the PC's share of the computer market, and also as a considered reaction to the arrival of Windows 3.0 and an increase in the PC's capacity as a user-friendly machine. Apple must also see the NeXT machine as a potential major rival in the battle for the desktop.

According to Clive Girling, Apple UK's Product Marketing Manager, the designers of the Classic were charged with the task of "taking all the good bits about the SE and building them into a lower cost solution". The specifications would indicate that the Classic is a little

# Macs in Every Home and Office

The arrival of the new machines will clearly improve Apple's chances of penetrating the business market, but it may take a change in Apple's marketing strategy for the Mac to catch on as a 'home user' PC in the UK and Europe.

The Macintosh has achieved a clear market lead among publishing companies and the launches are likely to be well received. Without doubt, the IIsi offers more power for less cost than the IIsi – "which is good news," as Ben Taylor, Future Publishing's system manager said. "I'll reserve judgement on the LC until I've seen one, but it's likely to be the machine I'll specify in place of the SE30 – the larger screen offers a distinct advantage, and colour is a bonus."

Outside the publishing environment, the LC may be less well received by businesses – while it brings down the price of an SE-equivalent Mac, the LC doesn't offer a NuBus slot and will not be able to handle the virtual memory management that promises to be one of the keystones of the new System 7 operating system.

The IIsi is likely to become the basic business machine – technically, it



# Join the Apple Mac range

# MAC TO GO...

# Kes up range



slower than the SE, but achieves a 25 per cent increase on the speed of the Plus which it replaces. Supplied with a SuperDrive (like all machines now shipped by Apple) the Classic will be offered in two configurations – with 1Mb of memory and a SuperDrive for £660, or with 2Mb of memory, a SuperDrive and a 20Mb hard disk for £1030.

The LC – which should not be considered as part of the Macintosh II family according to Apple – is apparently mid-way between the Classic and the current Mac IIcx in terms of performance. It will ship early next year in volume in one configuration only: 2Mb/20 – 2Mb memory and a 20Mb hard drive. With a colour monitor that offers 256 colours on screen, the LC will cost £1720; with a mono monitor, £1580 and without a monitor, £1420.

The Mac IIsi offers performance comparable to that of the Mac IIcx and has the same on-board video capabilities as the IIsi. The IIsi ships in three configurations: 2Mb/40 for £2639, 5Mb/40 for £3041 and 5Mb/80 for £3444. A colour 13" monitor costs £684. For £138 a 68882 maths co-processor can be added as part of an adaptor that allows one NuBus card to be fitted inside the casing.

## nd office?

does not replace the IIcx, which Apple plans to continue making. "We'll let customers tell us when they don't want a IIcx any more," Apple UK's Product Marketing Manager, Clive Girling, explained. "Some people may want the extra slots, while large organisations may be locked into the IIcx as an authorised purchase option for the time being".

However, the way that Apple sells its machine in the UK and Europe may keep the Mac from being a serious contender in the home market, despite the move on prices. Only authorised Apple Centres can sell Mac equipment – and Apple Centres can only quote the list price in advertising, although they do have some room to manoeuvre on price when they are speaking direct to a customer. In the USA, it is not difficult to secure a 15-20 per cent discount on list by shopping around, but in the UK only journalists, charities and educational users can buy from Apple at less than list price.

Should the Classic, LC and IIsi find their way into High Street multiples such as Dixons, however, the Mac could really catch on outside the workplace.

## End of the Clones?

The aggressively low pricing of the Classic – pitched at £660 for the 1Mb single floppy version and £1030 for the 2Mb/40Mb hard drive machine – could put paid to the market in Macintosh emulators such as Spectre GCR for the ST or AMax for the Amiga.

If you own a 500K Amiga or ST and plan to emulate a Mac, you could end up with a bill for £1,150 or £800 respectively if you need to buy a 20Mb drive, mono monitor, 500K memory upgrade and the emulator.

Emulation, with all the potential pitfalls of incompatibility and less than complete functionality, is no longer a viable route to owning and running a Mac, given the new low entry price to the Macintosh range.

And there will be the problem of acquiring a Mac ROM to fit into the emulating hardware, and even that has been made more difficult by the recent arrest in America of an Apple ROM counterfeiter who was, by all accounts, a major supplier...

## The three Macintoshes

### THE MACINTOSH CLASSIC

- 68000 processor, running at 7.83MHz.
- Memory expandable to 4Mb.
- 1.44Mb floppy disk 'SuperDrive' fitted as standard.
- Available with built-in 40Mb hard disk drive.
- Built-in 9" high-resolution monochrome display.
- All 'standard' Apple ports – ADB, SCSI, printer and modem ports, external floppy disk port, audio out socket.
- Available immediately 'in volume'



### THE MACINTOSH LC

- 68020 processor, running at 16Mhz.
- Memory expandable to 10Mb.
- 1.44Mb floppy disk 'SuperDrive' fitted as standard.
- Compatible with new Apple 12" monitor (the new colour display offers 256 colours or sixteen grey levels; while the new mono display offers 16 grey levels only) and 13" monitor (which offers 16 colours on the LC).
- Sold with 40Mb hard disk drive as standard.
- All 'standard' Apple ports, plus sound input, which comes with Apple microphone.
- Not available immediately - due to ship 'in volume' early next year

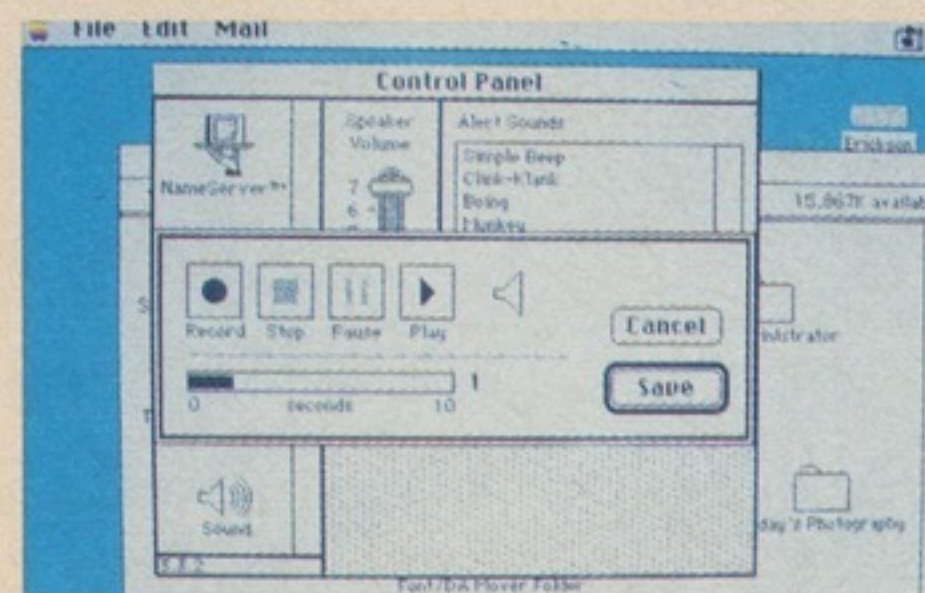


### THE MACINTOSH IIsi

- 68030 processor, running at 20Mhz. Optional 68882 maths co-processor available.
- Memory expandable to 17Mb.
- 1.44Mb floppy disk 'SuperDrive' fitted as standard.
- Can drive the full range of Apple monitors, offering the same video capabilities as the Mac IIsi
- Sold with 40Mb or 80Mb hard disk and in three memory configurations.
- All 'standard' Apple ports, plus sound input, which comes with Apple microphone.
- Can accommodate one Apple NuBus board via an internally-fitted adaptor card
- Available immediately 'in volume'



## Sound - a new dimension



• Recording a ten-second snatch of noise on the IIsi

Both the LC and IIsi are supplied with a microphone as standard. Apple is not entirely sure how sound will be utilised by developers, but at the very least you can use the mike to record speech or sounds and send audio messages with documents dispatched to another Mac by electronic mail.

These new machines come with the Macintosh Audio Compression Expansion (MACE) utility that supports 3:1 or 6:1 compression - so up to three hours of sound can be packed into 40Mb of hard disk space.

A new, regular Mac column starts on page 31



## Biggles in Space



• Wing Commander: deep space

Playing *Wing Commander* will not be so much a case of, "Chocks away, Ginger," as "Photon torpedoes primed, Captain."

The latest game from Mindscape for the PC places you in deep space, at the controls of a spaceship cockpit which makes Concorde look like a washing machine. Combining elements of space exploration with more traditional 'shoot-em-up' action, the game has 35 missions to be successfully completed. Mindscape also promises some "extremely cinematic graphics."

Released on October 25 at a price of £34.99, ST and Amiga versions should follow early next year. ■

## Mouse talk



• Tracey: fast draw

Look carefully at this picture of a mouse. See that lens stuck on the end? That's a new device which could help you trace pictures onto your computer.

It's called Tracey and costs £7.95, manufacturer Sidewise reckons that it's a snip.

"It's ideally suited to work with any computer that uses a mouse," said boss Simon Williams. "With Tracey you have a low-cost base level digitising tool at a tiny fraction of the cost of a graphics tablet. I'm convinced it's a break-through in graphic computing."

Tracey can be attached to either side of a mouse and, naturally, it works with any paint or drawing package. See your dealer. ■

# Phone book goes on-line and CD

To soften the blow of the soon to be introduced 43.5p charge for a call to directory enquiries, BT is to launch two new computer-based directory services for businesses next March.

Phone Base, will give subscribers direct access to BT's public directory database housed in Sheffield from computer terminals on their desks. Essentially, it will act as a giant comms service or bulletin board.

And Phone Disc is an electronic version of the phone books with the information stored on a CD.

Both systems offer access to all 17 million numbers currently in BT's phone books - ex-directory numbers will still be excluded. Whereas the information on Phone Base will be constantly modified subscribers to Phone Disc will receive an updated CD once a quarter. Both also allow a visual check on spelling of names and addresses and give the postcodes, which directory enquiries did not.

Phone Base is aimed at smaller business and there will be no charge for installation or rental, but calls will be charged at a rate of 6p per minute cheap rate and 13p per minute peak. The subscriber will receive a password and a telephone number to get into the database, but will need to have a compatible PC or visual display unit to view the information.

At an annual cost of £2,200, Phone Disc is geared for businesses making over 300 number enquiries a week. On subscribing, companies will receive the latest CD plus the software required to access the data. Again the users will have to provide their own PC. ■



• Phone Disc: but it doesn't prop up that wonky table quite as well.

## UK hacker in video nasty sensation

Britain's most notorious hacker Edward Singh has been arrested and charged with deception after admitting to breaking into the Ritz Video chainstore's computer system.

Singh was picked up two weeks ago by the Sutton CID after his revelations to a computer trade newspaper of the break-in. He gave *Computing* magazine comprehensive details of his hacking exploits.

However, he hasn't been arrested under the newly enforced Computer Misuse Act, because the hack was performed before the Act came into force. Police moved in following a complaint by the 800 strong Ritz Video chain.

The hacking community has been buzzing since Singh's revelations. One anonymous hacker called *Express* three weeks ago claiming that he had penetrated the system. The London based

man, calling himself Peter Right (sic), alleged that the system was easier to break than any he



• Singh: deception charge

had ever encountered. He also claimed that it would have been simple to corrupt the company's files, although Right stressed that his motivation was purely academic.

Singh said he had broken into the system only to highlight its security flaws - and the damage that could have been done by a cyber-nut.

Two years ago Singh made the headlines after hacking into British and US defence computers. He said his intention was to expose the insecure data problem and despite an investigation by the Serious Fraud Squad, no charges were brought against him.

Since then Singh has avoided the limelight; after his 'war secrets' hack he complained of harassment from "the sensationalist press". He is due to appear at Sutton Magistrates Court on 22 October, and will plead not guilty. ■

## Cyber mag launched

A new mail-out magazine purporting to take up a cyberpunk theme has been launched in the UK.

NRG comes from mail order and publishing specialist, Special Reserve, which is also responsible for adventure games magazine *Confidential*. The 24-page "cyberzine" will be mailed out to the club's 30,000 members - it costs £6 per year to join.

The mag's cyber theme doesn't go much further than the page headings. The mag features the usual games reviews (Shockware), charts (Critical Media) and letters (Jack-In-And-Flip-Out) and there's the obligatory weird mix and match of typefaces.

Comparisons with the magnificent Californian cyber mag *Mondo 2000* should not be made.

Special Reserve are on 0279 600204. ■



## Bubble bubble

Believe it or not, the super-large shot of the racing car was produced by a new bubble jet printer.

Canon's latest offering is the first ever A1 bubble jet making it the largest in the world.

It can manage 400 dots per inch and weighs half a ton. No price has been fixed, but we're probably talking five figures. ■



Sega joins Big Blue for PC games machine

# IT'S THE IBM CONSOLE!

Sega will launch a low cost IBM compatible PC next year; extraordinarily it will boast Megadrive compatibility.

The Japanese console and arcade machine manufacturer has teamed up with IBM Japan to supply a low cost AT. It will be aimed at buyers who want arcade quality games as well as access to serious IBM compatible software.

The 16-bit Megadrive, only launched in the UK last month, has proved to be a massive success in Japan. Already the console has broken Nintendo's grip of the games machine market in the Far East.

Sega will definitely be launching the machine in Britain next year. Industry sources say the UK computer trade is keen to introduce the hybrid at the earliest possible opportunity. However, last week no-one at Sega UK nor its main distributor - Virgin Games - was prepared to comment.

Virgin Games boss Nick Alexander restricted himself to: "If it is happening, and I'm not saying if it is or isn't, then it sounds like a good idea."

Japanese reports insist that the machine will come with an IBM motherboard. It will sport an AT style bus and 512K RAM. Buyers will be able to plug the machine straight into their television sets, and a special adaptor will be included to make Megadrive games run.

Prices in Japan are expected to start at about 200,000 yen and Sega is hoping to introduce the machine here for something in the region of £799. A Megadrive game, and possibly some serious business software, is likely to be included.

The long-awaited Megadrive CD-ROM drive will be one option open to gamers. It gives players access to some of the finest graphics on any home computer system and it will also be available to normal Megadrive owners; no UK price has been fixed.

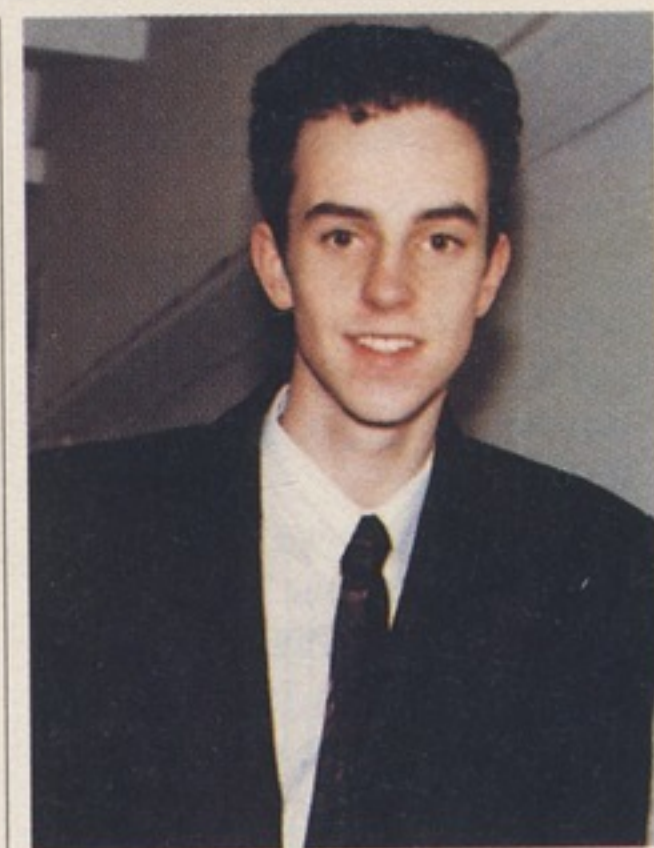


• Megadrive: PC version in the spring.

In the past two years Sega has asserted itself as Europe's front runner in the console stakes. The original Master System has clocked up sales of 250,000 in the UK and confidence is high for the Megadrive.

Last week Virgin Games upped

its 1990 predictions for the Megadrive by 10,000 and the firm reckons on a user base of 40,000 by the end of this year. There are currently 17 games available for the console - that figure will be closer to 30 when the Sega PC arrives. ■



• McLaren: taking store

## Talking shop

You could be forgiven for thinking that there's nothing particularly special about the opening of a new computer shop in Dundee. Except that this particular store is just a bit different from your run-of-the-mill hardware and software emporium.

It has been set up by an enterprising 17-year-old chap, whose main motivation is a love of computers (and a desire to make a living).

Scott McLaren decided to open his own shop when he realised that none of the outlets in his area catered for home computer users. His original plan was to start up a mail-order company, but when he saw a premises up for let, he decided to go the whole hog.

Bits and Bytes Dundee opened last Saturday with stocks worth £12,000 - funds were raised privately.

McLaren told Express: "I've been interested in computers since I was given a Vic 20 at the age of eight. I think my enthusiasm for the subject will help me communicate with customers. It's more than likely that I like the same things that they like. That's much better than talking to a 40-year-old with no love for computers."

"I haven't really got any background in the computer industry. It's pretty hard to have any background at all when you're 17."

But the Dundee born entrepreneur also reckons he's got the business acumen to cut it with more experienced business people. ■

## Apocalypse Now

A world on the brink of thermonuclear warfare provides the background for *The Final Conflict*, the latest offering from Impressions.

Available from the end of October for the ST and Amiga, with a PC version following in November, the game casts the

player as the premier of a country of their choice.

But to win requires more than just blowing up your enemies. The game also demands diplomatic skills and careful management of resources. So now you can be Maggie or George for just £24.99. ■



• The Final Conflict: fun with the state-of-the-art in thermonuclear technology

## Worms come clean



• Worms: even smarter than an Archimedes

Earthworms are helping scientists develop the next generation of computers.

Japanese high-tech giant NEC has been piecing together a cell structure of the C Elegans worm's brain. They want to unravel a complete genetic 'wiring' system, which could be put to use in Artificial Intelligence.

Project leader Dr Ken-Ichiro Higashi, believes the mechanisms used in the worm's brain which recognises objects could be transferred to computers. ■

## Gameboy basher

Details of a Nintendo Gameboy basher, due to be launched later this year, have reached Express.

We understand the machine is to be called Game Mate. Joystick manufacturer Cheetah will be importing the £59 machine into the UK from an unknown source in Taiwan, it should be arriving next month.

It features a horizontal screen - which is a half inch bigger than that of the Nintendo machine. Full details next week. ■



## SPECIAL NIBBLES

Viruses have become a fixture of the computing world, but this doesn't mean that the first time you find out about them is when they hit you. Nibbles brings you the latest now.

- The alleged creator of several Macintosh viruses including MDEF, CDEF and MDEFB has finally been nicked. The unnamed man has been identified as a student at New York's Ithaca High School. However, the local authorities do not want to prosecute – they say this is because the chappie has co-operated with them.

- It's not just Mac owners who are aware of the threat of infection; PC owners are often at the mercy of the evil doer. They should look out for the 9k sized Whale AKA Motherfish virus. This is the first 'armoured' virus known. Heavy duty and complex.

- Norton's Anti-Virus took a drubbing at the recent PC Business Show. Norton challenged people to bring infected disks to be examined. One such disk containing several notorious viruses was passed as clean. One which slipped past what was supposed to be "the most complete virus protection utility on the market" was the worryingly named Amstrad virus. Trouble is, no-one is quite sure what it can do.

- The centre of virus production appears to be Indonesia at the moment. Several new Indonesian digital diseases have been spotted recently. They are: Freddy which infects IBMBIO.COM, Arema a Den Zuk variant, Hacker - very much like Ohio, and Supernova which will trash a disk when the printer is in use.

## Computer perjury?

Computers are too unreliable to be used as evidence in court cases, according to Mark Tantam, a computer expert formerly with the Serious Crime Squad.

At a conference on computer security last week, Tantam called for the rules governing the use of computers in court to be amended to take account of the fact that they cannot be presumed to work reliably. He believes that computers "often work in totally irrational ways that nobody can fathom."

His argument is based on current rules which only require proof that a print-out is reliable when there has been human intervention. Tantam says this presumes that the equipment was working correctly when no human operator was involved.

As a result, a computer print-out which is incorrect can be used in evidence, and the producer of the print-out is under no obligation whatsoever to let the court know. ■



• The thought of a Mac in a tutu might not be everybody's idea of a turn on, but ballet dancers could soon find their steps are being worked out by a new breed of choreographer.

The One Extra Dance Company in Sydney, Australia, has enlisted a Mac to help compose and record dance presentations for professional performances.

The piece on which the electronic maestro is working at the moment is particularly apt, as the Iliac Suite was composed in 1957 on a primitive mainframe, the Iliac computer.

## Atari on the rails

If you own an Atari machine you're probably thinking it's about time you caught up with what the company is up to. Atari, in its unfathomable wisdom, decided to give the Computer Entertainment Show and Business Computing '90 a miss, leaving all the glory to others at these fine events.

Still, you can check out the latest developments, talk to the hardware techies and the software bods on the Atari "Whistle Stop Tour 1990" this month.

It's being held on a train which will be stopping at six major railway stations around the country. Here's the dates:

October 23: Bristol Temple Meads; 24: Manchester Victoria;

25: Leeds; 26: Newcastle; 27: Glasgow Central; 29: Birmingham International

Visitors to the Bristol date will be able to talk to a babble of Express writers who have been invited along. Other companies planning to show up include Mirrorsoft, Microdeal and Third Coast Technologies.

The train won't be stopping in London. An Atari spokeswoman explained: "We already staged the Atari Show in London last June. The idea of the tour is to see the people who find it difficult to get to London. We want to get out there rather than wait for people to come and see us."

Plans are afoot for another Atari show next year, although nothing has been confirmed. ■

## Year end profits signal start of a new era

AMSTRAD SLIPS  
43 PER CENT

Amstrad finally, reluctantly, resigned itself to the realities of middle age last week, after announcing a 43 per cent drop in profits for the year ending June 30 1990. Profits have dropped by 75 per cent since the company's youthful heyday of 1988.

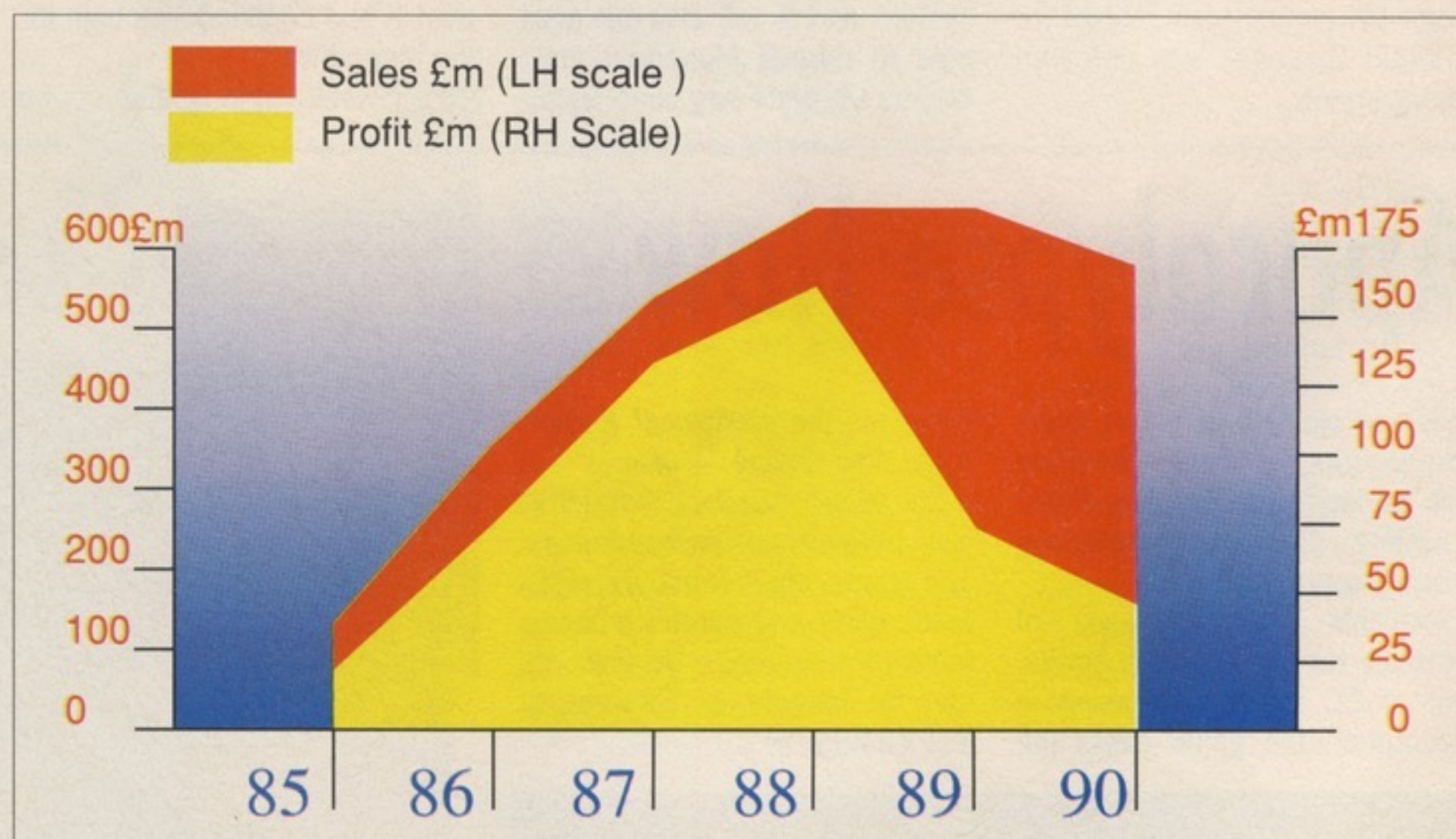
The firm's reliance on the computer industry has waned considerably over the past year. In its last fiscal year Amstrad clocked up £347.4 million in computer sales – compared to £447.7 million in 1989. Computers make up 60 per cent of Amstrad's turnover – in 1989 it was 70 per cent.

Profits were down from £76.6 million and turnover dipped 7.8 per cent from £626.3 million to £577.3 million.

Nevertheless, the City is viewing the results as a natural settling period. Last Thursday the broadsheet business pages and the Financial Times applauded the company on its performance through "these tough times". Amazingly, the company's share price held steady all through the end of last week, signalling City confidence.

When profits dropped by 50 per cent in 1989 the press could hardly contain its glee, and share prices dived disturbingly.

The papers also dwelt on the inevitability of a sales slide. Techniques which served Amstrad



• Up and down: Amstrad's sales and profits since it entered the computer industry. Since 1985 there's been the Spectrum buy-out, the CPC, PCW, PC1512, 1640 and PC portables. The company's also had the less impressive PC200 and 2000 series.

well in the mid-1980s have not been ignored by competitors. And the business computer industry is not growing at anything near the rate of 1986-87.

In the past year the company has managed to wipe out a nasty bank debt of over £100 million, and it has re-evaluated the worth of its stake in the loss making US chip manufacturer Micron.

Astute boss Alan Sugar still retains 44 per cent of Amstrad, which he set up in the late '60s.

As promised, Amstrad managed to stick to an ambitious

product introduction schedule. This year we have seen the Generation 3000 series of professional computers, the new range of high performance portables, the upgraded CPC home computers and the low-cost CPC console. All have been received warmly. The product launches of 1988-89 included the ill-fated PC200 machine and the off-scorned 2000 series.

There have also been fax machines and the 'Double Decker' video recorder. Sales of satellite dishes have increased

three fold with exports rising on the continent.

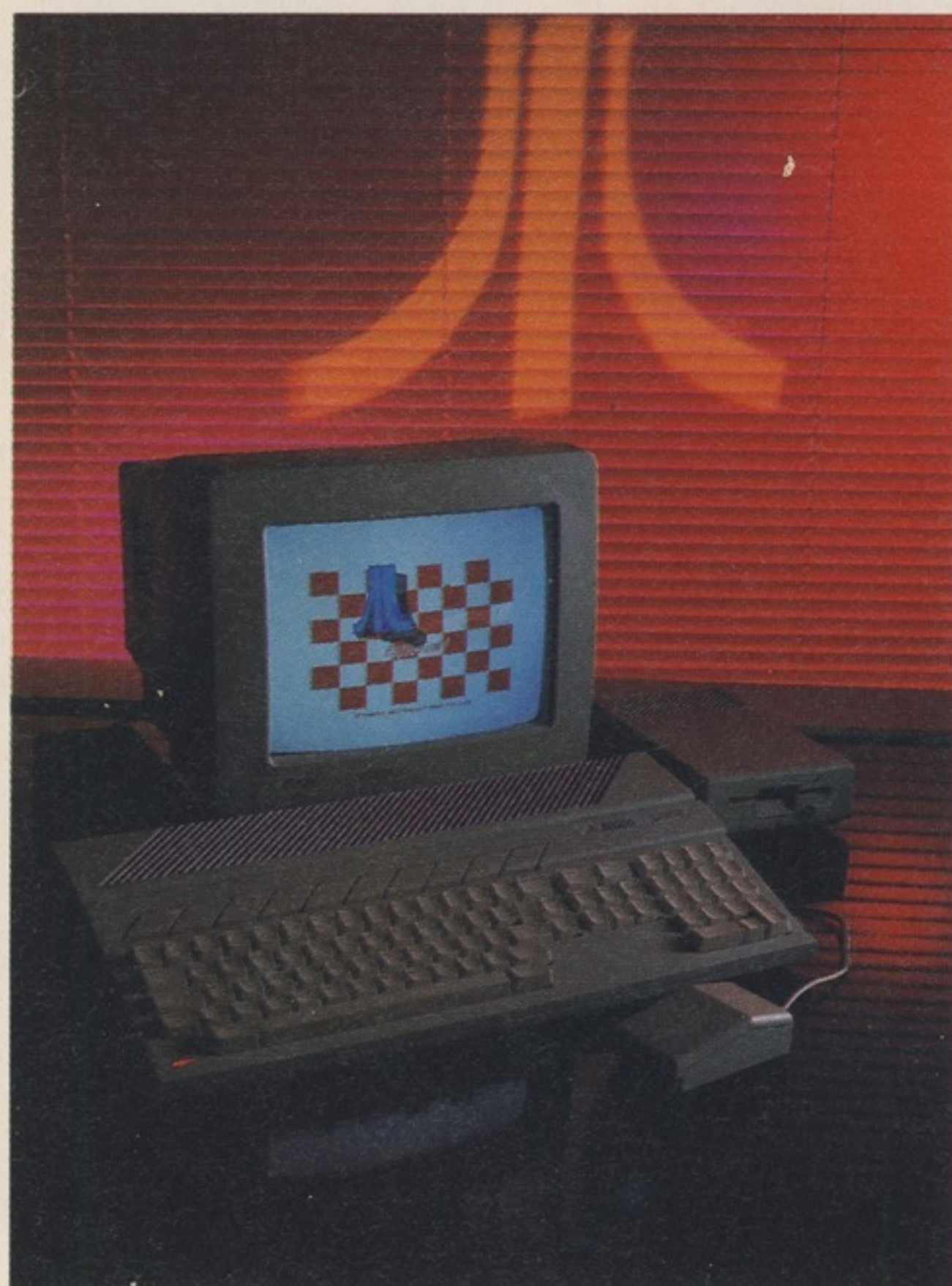
In the company statement. Alan Sugar refrained from some of his more outrageous predictions, preferring to accept a "realistic view" of the market. He said: "Realistically we cannot ignore the current economic climate and I just hope that there is no further deterioration which would have a severe impact on our business."

He stressed the importance of having new products but promised nothing specific. ■



Atari: no guarantee of third party drive compatibility

# STE HARD DISKS UNDER THREAT



• STE: hard times

By Dave Golder and Andrew Hutchinson

**Atari's upgrade to the ST, the STE, has once again run into trouble.**

The firm has admitted that some STEs may be incompatible with hard drives owing to a faulty DMA chip; but Atari is (as usual) reluctant to reveal the extent of the problem.

It has emerged that extended use of the faulty DMA chip may corrupt information on a hard drive after three or four hours. Atari has agreed to repair faulty STEs to make them compatible with Atari hard drives, but it offers no guarantee of compatibility with third-party drives.

Atari appears to be playing down the problem even though it has been aware of the situation for some time. Despite sending out a confidential report (ST/HW/00070) informing dealers of the problem, Atari has decided against recalling faulty STEs.

A spokesman for Atari said that the company is "more than satisfied" with the situation and

stressed that it is "only a small batch of STEs which were affected." Atari says that all STEs shipped in the last three months feature the new redesigned DMA chip.

But suppliers are telling a different story. Hard disk manufacturer, Gasteiner, estimates that as many as half of its stock of STEs has the fault. And when Paul Glover of the influential ST Club contacted his supplier about the trouble he was having with his hard disk, he was told that up to 30 per cent of some batches of the STE were faulty.

Last Christmas the STE was experiencing compatibility problems when some software would not run on the machine. Then, Atari laid the blame at the door of overly-adventurous programmers, but this time it appears that Atari itself is at fault.

Atari's message for anyone with a faulty STE and third-party hard drive is: "While we are sympathetic to the problem, we are not in a position to help at this stage." Hard drive buyers should consult their dealers. ■

## 999 blunder costs capital millions

**More than £13 million and six years' work have been thrown down the drain by the London ambulance service on a computer system which does not work.**

It was designed to handle 999 calls, but has proven not only unreliable but also unable to handle the volume of emergency calls made in the capital.

The system is supposed to pinpoint which of London's ambulances is nearest to an emergency at any one time, but failed two major tests last month. Subjected to 800 calls in any one hour - a typical Saturday night - the system just could not cope.

Ambulance chiefs admit that there are still "teething troubles", but after six years it seems they have little choice other than to scrap the system and settle for an off-the-shelf solution. ■

## China goes C64 crazy

**The Chinese government has bought 10,000 Commodore 64 machines for use in administrative and educational establishments.**

The order was placed with Commodore Australia which is now claiming the biggest single purchase of personal computers by volume. The deal was worth \$20 million.

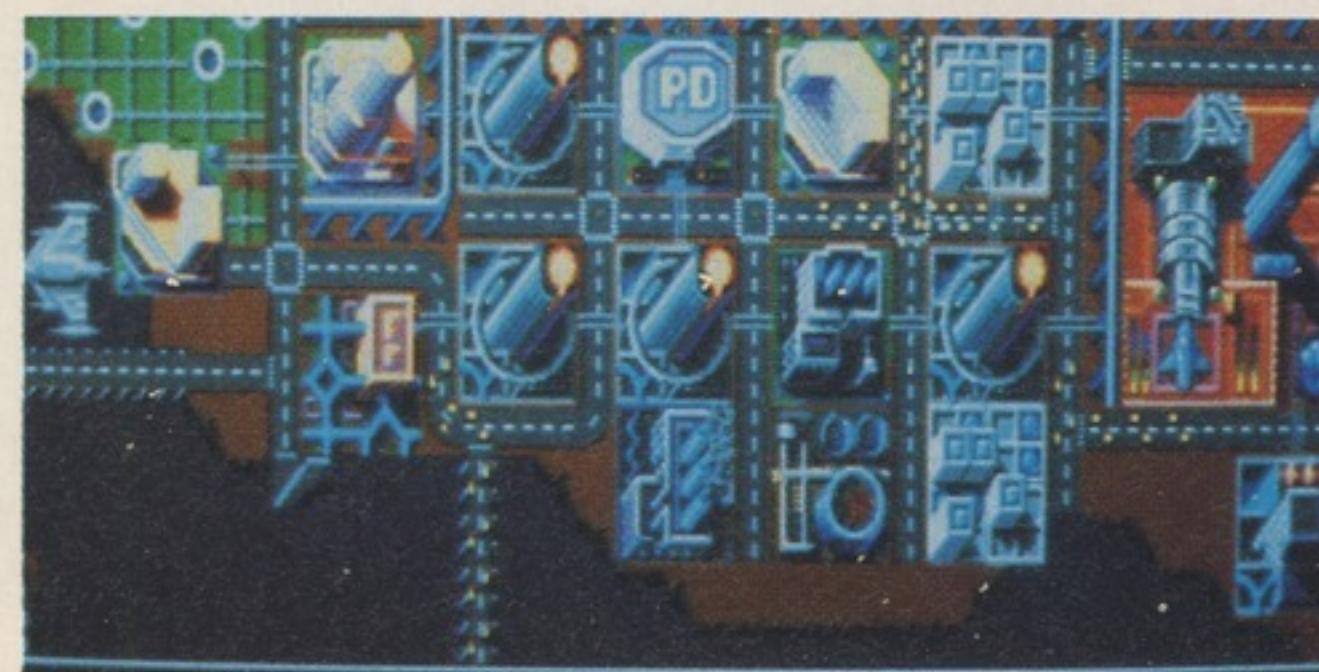
A spokesman for Commodore in the UK said: "The C64 is a great platform for all sorts of applications and it's especially useful in places like China." ■

## The natives are revolting

Up those taxes, bulldoze that slum, whack in a police station, sprinkle on some grass and trees. You can paint the town any colour you please in Sim City, every megalomaniac's favourite wheeze.

But if you've tired of controlling the fate of the original towns you might be tempted to try two new graphics sets featuring six environments. *Sim City Architecture 1* could put you in the slippers of *Shogun* controlling hundreds of tiny Japanese villages, or there's a 'Medieval Times' option in which you live in the castle and everybody else doesn't. There's also the gold greedy Wild West complete with rattlesnake and bad types who burn barns.

*Sim City Architecture 2* features the total high-tech overload of New Town USA in the 21st Century, or you can allow for cultural preservation in Old Town Europe 22nd Century. The Infogrammes data disks are available on ST, Amiga, PC and Mac for £19.99. ■



• Sim City Future Europe: keep up with the real world.

## By Royal appointment

**If your hundredth birthday congratulatory letter from the Queen comes through your letterbox when you are still a sprightly 90, you could hear an excuse all too familiar in the modern world: "Sorry. Computer Error."**

Buckingham Palace has finally given in to the technological revolution with the installation earlier this year of a fifteen workstation document image processing system based on UNIX. It's being used for the whole range of correspondence and administration carried out at the Palace.

Besides keeping track of hundredth birthday and Diamond Wedding messages, the system also produces the Court Circular, keeps detailed historical information on the Royals - including the Corgis - records a daily summary of press articles and deals with press requests for



• Queen Liz - summoned computers to the Court.

interviews and media arrangements at Royal engagements.

CMG believes the system, with its two 300mb magnetic disk and two integrated one-gigabyte optical disk drives, to be pretty special.

Amazingly, the system has been installed since February - but due to security and training, the Palace had deemed it necessary to wait seven months before releasing the news. ■

## Think it over

**Astound your friends with amazing pearls of wisdom. Intrigue your colleagues with a deep understanding of the many ways of the world. Blow everybody's minds with the help of a new program for your PC - Wisdom of the Ages.**

It's a selection of 6,500 thoughts made up by the great thinkers from history. Shakespeare, Aristotle, Freud, Confucius, and another 996 astute people have put in their penn'orth.

It comes from Micro Computer Resources in the US and costs \$79. Contact 0101 800 767 6796. ■



# THE WEEK IN VIEW

Much is voiced and written about the harmful effects of computers, especially on how they change children. Peter Walker, Atari UK's PR man, questions the reality of these charges.

**M**uch ink has been spilt and heart searching done about whether computing is harmful to the young. 'Computers cause skin problems; computers cause anti-social behaviour; computers make kids hide away playing games; they become inarticulate; they become aggressive because of the violent nature of computer games. Computers turn kids into zombies, cause repetitive strain injuries.' And so on.

So what is the reality? Where is the evidence? Let us look at the charges one by one.

Adolescents had skin problems long before computers arrived. Kids have always tended to hide away doing some hobby, whether stamp collecting or playing with trains. They have a tendency to be either too articulate or too inarticulate and computers have not changed that. What's more, children have always had an aggressive tendency. After all, growing up is partly adding a veneer of civilisation over the natural animal tendencies of selfishness. Surely it is better to simulate aggression with a joystick than to throw stones at a dog, or tie tin cans to the tails of cats (pastimes of pre-computing children).

Getting rid of one's aggression is said to be healthy. Indeed Japanese employees are encouraged to hit punchballs resembling their bosses to get rid of aggression. It could be that playing aggressive games is healthy, not unhealthy. As for obsessional behaviour, it is not the prerogative of the young? The world is full of older folks playing bridge or bowls seven days a

week and what about all those joggers and marathon runners? The truth is that people with obsessive natures need an outlet for that nature. Computing is a suitable outlet - it does not cause obsessive behaviour.

#### More On The Plus Side

What are the benefits of computing not already expounded? Firstly, art. The modern drawing program enables budding artists to test out his or her skills very quickly. Pictures can be modified at very high speed, and shading and other effects are trivial tasks. Secondly, many superb music programs exist which permit the rapid development of musical effects and even composition. Who knows how many budding composers will burst out of this musical egg? Creativity can be encouraged and developed, given the right tools. Computers can be great confidence builders.

Amongst all the keen players of computer games there will always be a few whose urge to experiment extends to actually programming their machine. Whether these skills, possibly enhanced by school study, lead to a career is not important. What matters is that logical thought processes are being encouraged, particularly if Top Down and structured programming is learned; the skills gained will be of great assistance when any large task is being planned.

A computer is like any piece of equipment put into the hands of a child, from a bicycle to a knife. Used wisely it is a valuable addition to the child's life; abused, it does damage.■

Hey! Get in touch with us! *Express* is always on the look out for news leads and tip-offs - and we'll pay you for passing them on too!

Also, if you have any burning ideas for features or surveys then drop us a line - remember, we cover every aspect of computing.

You can contact us directly on :

Voice : 0225 442244

Fax : 0225 446019

(All news leads and tip offs will be treated in strictest confidence)

Or you can leave E-Mail for us on :

CIX @ astorer

GOLD @ 84:TXT152

COMPUSERVE @ 100012, 1075

PRESTEL @ P McDonald

## Express Access

COMPUTER  
EXPRESS  
NEW

EDITOR • Andy Storer

DEPUTY EDITOR • Stuart Anderton

NEWS EDITOR • Colin Campbell

ART EDITOR • Amanda Cook

TECHNICAL EDITOR • Keith Pomfret

STAFF WRITER • Tim Smith

PRODUCTION EDITOR • Julie Tolley

SUB-EDITOR • Steve Coulter

CONTRIBUTORS:

Steve Carey • Robin Alway • Jason

Holborn • Rod Lawton • Hadyn Fitz-

Williams • Mark Higham • Adam Waring

Richard Frederick • Sean Masterson

Ken Coumarin • Steve Gold

ASSISTANT PUBLISHER • Jane

Richardson

CIRCULATION DIRECTOR • Sue Hartley

ADVERTISEMENT MANAGER • Helen

Kirkhope

AD EXECUTIVES:

Phil Davenport • Tim Partridge • Cheryl

Beesley • Jason Spice

AD PRODUCTION • Tracy O'Donnell

AD TYPESETTING • Terry Turner

PUBLISHER • Graeme Kidd

ABC audited circulation

January-June 1990:

21,251 copies per week

We regret we cannot enter into any personal correspondence. Technical enquiries should be addressed to Tech Tips at the address below.

While every care is taken in the preparation of *New Computer Express*, Future Publishing cannot be held responsible for the consequences of any errors that may occur.

© Future Publishing Ltd • 30 Monmouth Street, Bath BA1 2BW • Tel: 0225 442244 • Fax: 0225 446019 •

Subscriptions: The Old Barn, Somerton, Somerset (0458) 74011 • Printed by Redwood Press,

Melksham, Wilts

• Distributed in UK and Eire by MMC Ltd (0483 211222), rest of world by Comag (0895 444055)

# COMING NEXT THURSDAY

## Lights, Computer, Action!

The *Express* guide to desktop video on your machine

## Canon Colour

A look at the camera and copier king's software solutions for colour

## PLUS

- Hot news
- Front End
- Games Week
- The Console Zone
- Whole Wired World
  - Centrefold
  - Tech Tips
  - Circuit City
- Express On-line
- Express Mail
- The PD Column
- Columns for: Amiga, Arc, CPC, C64, Macintosh, PC, Spectrum, ST

## AND

Yes! That £2000 laser printer is still up for grabs!

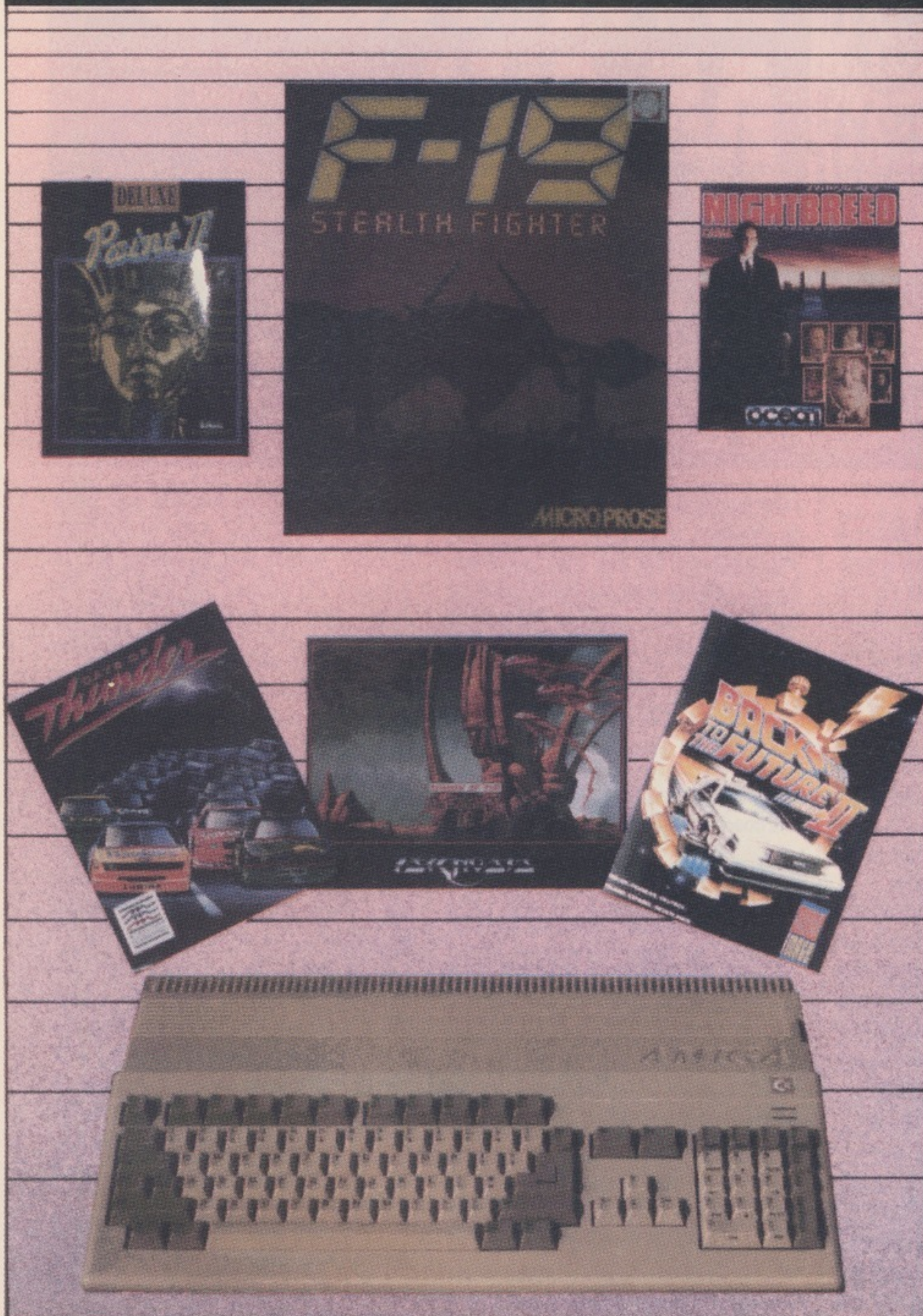
AT A  
**NEWSAGENT  
NEAR YOU ON  
25th OCTOBER**



**NEW**

# Commodore SCREEN GEMS

**AMIGA™  
500**



**SCREEN GEMS is  
the only NEW  
Official Amiga A500 pack  
from Commodore !**

## pack includes

- ☐ Amiga A500 Computer Keyboard
  - ☐ 512K Random Access Memory
  - ☐ Built-in 1 meg double-sided disk drive
  - ☐ Superb 4096 Colour Graphics
  - ☐ 4 Channel Digital Stereo Sound
  - ☐ Speech Synthesis
  - ☐ Multi-Tasking Operating System
  - ☐ Kickstart 1.3 and Workbench 1.3
  - ☐ Three Owners Manuals
  - ☐ Extras 1.3 and Tutorial Disk
  - ☐ Amiga BASIC Programming Language
  - ☐ Notepad Mini Word Processor
  - ☐ Commodore Mouse
  - ☐ Power Supply Unit with mains plug
  - ☐ TV Modulator
- ..and all connecting cables to get you up and running on your home TV set!

## plus

- ✓ Shadow of the Beast II
- ✓ Days of Thunder
- ✓ Back to the Future II
- ✓ Night Breed
- ✓ Deluxe Paint II Art Package

## plus FREE DIGISTAR pack

*10 great software titles and accessories worth over £235 - Only from DIGICOM!*

- |                          |                      |
|--------------------------|----------------------|
| ★ Microprose Soccer      | ★ Grand Monster Slam |
| ★ RVF Honda              | ★ Powerplay          |
| ★ Kid Gloves             | ★ Tower of Babel     |
| ★ Datastorm              | ★ Shufflepuck Cafe   |
| ★ Dungeon Quest          | ★ E-Motion           |
| ★ Microswitched Joystick | ★ Mouse Mat          |

**and exclusive to DIGICOM!!!**

## F-13 Stealth Fighter

*The Ultimate Flight Simulator game from Microprose worth £34.99!*

**Total package price includes VAT and Next Day Delivery by Courier\***  
**Don't delay - Order now! 24 Hour Credit Card Hotline Telephone (0908) 378008**

## How to Order



By Phone - Call our Credit Card Order line on (0908) 378008 and quote your card number and expiry date along with the details of the goods you require. We accept ACCESS, VISA, EUROCARD, MASTERCARD, AMEX the new Direct Debit cards like Barclays Connect and we also accept Lombard CreditCharge Cards.



By Mail - Simply write down your requirements and send in your order to us by post along with a personal cheque, bankers draft, building society cheque or postal order made payable to "DIGICOM COMPUTER SERVICES LTD".  
\*Please note:- Personal cheques require 7 days clearance before despatch.



Next Day Delivery is Mon-Fri. Saturday Delivery is £3.00 extra

## Catalogues!

Ring or write in for our latest Amiga catalogue listing hundreds of products available for this versatile Home Computer. We stock COLOUR PRINTERS, STEREO COLOUR MONITORS, EXTERNAL DISK DRIVES, MEMORY EXPANSIONS, HARD DISK DRIVES, AMIGA BOOKS, FRAME GRABBERS, DIGITISERS, SCANNERS, WORD PROCESSORS, DATABASES, SPREADSHEETS, ACCESSORIES and of course hundreds & hundreds of games and all at well below recommended retail prices!

## Service you can depend on!

Digicom offer you the very best in customer after sales support with 12 month warranty on all Computer Hardware. All units are full UK specification with 30 day replacement guarantee on faulty items and FREE collection of the defective units within this period. And should you ever need any technical advice our experienced and helpful staff are available on the telephone or in our showroom. Remember - there are no hidden extras all prices are fully inclusive of VAT and next day courier delivery.  
Prices & Specifications are subject to change without notice E&OE.

only.....

**£399**

☆ or spread the cost with our finance facilities - written details on request.

# DIGICOM

36-37 Wharfside Watling Street  
Fenny Stratford Milton Keynes MK2 2AZ  
Telephone (0908) 378008 - Fax (0908) 379700  
Showroom Hours - Mon to Sat  
9.00am-5.30pm



## ■ No News?

Right. That's it. I've read enough complaints about the changes in your mag. First of all, there must be a good reason why you have stopped some of the columns – how on earth are you supposed to print any news about a certain machine when there is no news about that machine to print?

And no, I do not own an Amiga or ST – I just enjoy reading every column, no matter what machine. It might have helped if all those readers who complain about the column for 'their' machine being dropped sent something in for you to print about their machine – POKEs, fanzines, PD etc.

Anyway, I think the new-look NCE is brill – you get far more for your money, news from everywhere that's worth hearing, up-to-the-minute info and so on. Keep up the Brill work.

Jane Burman, Hutton Cranswick, Yorkshire

But we haven't abandoned the minority machine owners, you know. For instance, last week we brought MSX owners news of the MSX 3 machine and in glorious living colour too.

If something happens, you can rest assured that we'll let you all know...

H F-W

## ■ Woggle-Waver

I spotted your 'in depth' article on Scouts an computers and thought you may wish some more information.

The computer badge is not just available to Scouts – Guides and Brownies are also able to earn this badge. The work required to obtain it has nothing to do with games playing. The candidate must first write a minimum ten-line program using subroutines and branching loops and must also show a knowledge of the working parts of a computer and associated

information storage devices.

Other uses of computers in Scouting are the same as in any other large organisation. I like to think I was one of the first to use computers in Scouting, as I would keep records of my Venture Scout Unit and Award Scheme on my ZX81! This was many years ago before the advent of the old rubber-keyed Spectrum.

At the recent national 'Go For A Million' camping weekend here in Plymouth we used a computer to keep track of the 750+ boys on the campsite. We also used radio and cellular phones!

I'll go out on a limb here and say that Scouting in the '90s is not just shorts and 'Ging Gang Goolie', but an organisation that strongly believes in the development of young people, and will use whatever technology is available to further and promote the aims of the Scout Association.

Dave Burns, Group Scout Leader, 1st Wembury Scout Group

PS Now that you are the ONLY weekly computer paper, you have quite a lot of

# EXPRESS MAIL

With your new and regular host, Haydn Fitz-Williams, the man with the fivers to give away...

Write and tell HFW what you think about anything under the Sun! Reach him at: *Express Mail, 30 Monmouth Street, Bath BA1 2BW.* Sorry, no personal replies, even with an SAE, as we're too busy writing the magazine.

expectations to fulfil. This cannot be done by alienating readers who are quite happy with equipment that you don't feel is worthy of a specific area any more. Could the fact that you were aware of Pop's imminent demise have had anything to do with your decision to drop these machines? Knowing that readers would have nowhere else to turn?

PPS I'm prepared to bet my woggle that this doesn't get printed.

I expect to receive your woggle by return, Dave. Send it to the usual address.

As for our motives in dropping some machine-specific columns, the views of the next correspondent sum the position up very succinctly. We had no idea that Pop was about to curl up and die when we planned the changes – we were just refining our product.

Thanks for the supplementary information on the Scouting movement, by the way. Our technical consultant on the

story (who sourced the pic) was none less than Ian Wrigley, editor of the 1991 *Scouting Annual* and ex-leading light of Scouting HQ no less. Ian works for one of our sister magazines, and I've asked the publisher to take his journalism badge away...

H F-W

## ■ Clean Names

A couple more additions to your list of unfortunate nomenclature. Alright, so they've got damn all to do with computers, but if you've got one or two spare fivers lying about you're welcome to print them.

The first concerns a new model of car launched in Mexico by Ford. After quantities of brain and thesaurus searching, the marketing people came up with the suitable-sounding name 'Caliente'. However, it was hurriedly changed to the unromantic S-22 when dealers informed the company that in Mexico, Caliente means 'street walker'.

The other was perpetrated by General Motors (who trade as Vauxhall in this country) who put the Nova on the Mexican market without any alteration to the name. When reasons for the unusually low sales were sought, it was discovered somewhat to late that No-va in Mexico translates directly as 'won't go...'

By the way, if Protext 5 does have such a great spelling checker, how come Steve Carey's ST column in issue 98, supposedly entered using Protext, contains the word 'newsagenmts'? Surely you're not going to tell us that this is a real word used out of context?

Leigh Caldwell, Glasgow

Absolutely not, Leigh. but I am going to tell you that Steve Carey is a real person used out of context. Make of that what you will...

Seeing as your tales of names don't strictly adhere to the computer brief, I'll send you a single fiver before offering a few of my favourite unfortunate names. There's the hot chocolate drink you can find in French supermarkets that is

## ■ Bit Bopper?

My Amiga developed a fault after my little girl decided to pour orange juice inside it, so I decided to open it up and try to clean it. After I had completely taken it apart I was left with a pile of components on the table.

I decided to count the bits I had taken out. There appeared to be a lot more than the claimed 16 bits.

Maybe this will start a whole new argument about 'my 50 bit computer is better than your 45 bit', etc. If you were to take a hammer to it, you would end up with even more bits...

I wonder exactly what the record amount is?

R Archer, Hounslow, Middlesex

Oh dear! You could have started something dangerously expensive Mr Archer.

H F-W

• Could you bring yourself to smash up this good-looking Amiga just for the sake of counting the bits?





# MAIL SHORTS

## ■ Red Plot

...you mentioned in your news pages that Lotus has just won a court battle with several publishers over the look and feel of 1-2-3. I can't help feeling that Lotus have a similar policy to that of Nintendo... If Lotus and Nintendo were allowed to succeed in taking away our rights to choose the type of software we want, then we'd all be converts to communism.

C Andrews, London

Er. Well. Um. Don't quite see the gist of your McCarthyist argument I'm afraid Mr A.

H F-W

## ■ Hack Appeal

I've heard of the magazine 2600, but if you know of any others and where to get hold of them, I'd be very grateful.

Michael McLarnon

If anyone out there would like to send me a copy of 2600 or any similar publication I'd be most interested. And then I'll pass the details on to Michael

H F-W

## ■ Sean Spotter

...is the Sean Masterson, your C64 columnist, the same one who used to review for CCRAP 64? I think we should be told.

J Spencer, Brentwood

He is indeed, the very same. Only these days (after passing through a White Dwarf) he works full time on the new mag Commodore Format. If there are two things Sean knows about, one of them is the C64. (We don't talk about the other one.)

H F-W

## ■ Ego Trips

...following on from your story in Issue 98 I'd just like to say that I don't really care who it is who writes the games I play. Renegade's idea of making programmers into superstars is a silly idea as far as I am concerned. All it will do is attract the ego-merchants to sign with Renegade and we'll have to put up with trendy photos of byte-hounds on the packaging.

John Miles, Pershore, Worcs

I doubt we'll be seeing programmers in 'Game Videos' or on Channel 4 discussion programs for a while yet John. I shouldn't worry too much if I were you. Just keep playing the games and having fun...

.. H F-W

boldly labelled 'Bonky' (as in curling up in bed with a good book and a Bonky, no doubt); the unfortunately-named Danish sweeties that are called 'Sor-bits'; and the insensitively named Australian cheese by the name of 'Coon'.

Unless I get any more good computer-related names, let's consider this strand of correspondence closed.

H F-W

## ■ Villainy

With regard to your request for letters on the subject 'I saw a program doing this on a XXX computer, and it made me think how I could do this on my YYY computer'...

Recently, I saw an old re-run of *The Sweeney* in which Hywel Bennett guest starred as a computer hacker. At the climax of the programme, the young-looking Mr Bennett hacks into a company's computer and types the following command: 'Redirect Gold Bullion Lorry From Previous Instruction To Big Ramshackle Warehouse Down By The Docks.' (I can't promise that was exactly how the the command was, but that's as near as dammit.)

As soon as Hywel hit the ENTER key, the gold bullion lorry shown in the next shot suddenly changed direction and was heading for the empty warehouse in the Docklands where his heavy mob was lying in wait. (Of course, Regan and Carter tumbled the plot at the last minute and there was the usual Flying Squad mass brawl down by the docks before the villains were carted away leaving Regan to mumble 'He'll be out again in two years, bounced back on the streets with a slap on the wrist from some bleeding heart liberal judge', etc, etc.)

The point I'm trying to make is, how can I get a copy of the operating system that has such user-friendly commands. I'd dearly love to re-direct a gold bullion truck to my flat, but there's nothing on the market that could enable my Amiga to do that. Can anyone help?

Nick Booth, London

Well, it's not quite an operating system that you're looking for is it? More a criminal integrated package that can get the gold round to your house, allow you to tap into the world futures markets and dispose of the ill-gotten gains as a vast profit, then set up a spreadsheet to monitor the progress of your investments in a range of off-shore companies.

You know, the kind of package you find running on the dealer desk in any self-respecting City firm...

Nice idea, though, so I'll award you one of this week's fivers.

H F-W

## ■ Poor Programs

A plea to programmers everywhere: while you're perfecting your copper lists, filled vector routines, parallax scrolling etc, spare a thought for how sensibly your program is laid out. I've always imagined programmers to be a logical bunch, and yet

so many programs are let down by silly and unnecessary quirks or oversights.

For example, why is it that *Stunt Car Racer* almost always needs two presses of the fire button to select any menu option... why does the time freeze in *Kick Off 2* almost every game, and surely Dino Dini doesn't expect me to score with a corner from my own end... As for bloody AmigaDos why does the line 'DELETE RAM:#?' try to delete everything BUT the contents of RAM unless RAM happens to be in the current directory?

Now don't get me wrong, I'm not saying that the above-mentioned software is crap. I wouldn't be without any of it. But I don't want to be bald by the age of 30!

The programmers will argue that deadlines often force them to release unperfected versions. Take *F29 Retaliator*, for instance, which is riddled with minor bugs. I get the impression that many software houses are more interested in successful marketing than in anything else.

But it can work against them in the end... Federation of Free Traders being a good case in point, and it certainly doesn't help their arguments against piracy. May I suggest that 'Annoyance' is rated alongside 'Playability' in reviews of software – and maybe then software houses will stop insulting the intelligence of their customers.

Stephen Ward, Norwich, Norfolk

The trouble with writing programs is that you can never take into account the potential stupidity of users – or the infinite number of ways in which an applications program might be used (or abused). Sure, software should be robust – I expect the copy of *XPress* I use to prepare these pages to behave itself impeccably, which by and large it does. But then I paid nearly £800 for the program, so have a right to expect quality. £25 might seem a very large amount of money to pay for an Amiga game, but in the wider scheme of software, it's a real bargain.

And the technical man on our sister title *Amiga Format* says you're being a plonker about that DELETE RAM command. He uses it all the time, without any problems. Maybe, sometimes, it's just you Stephen?

H F-W

## ■ Depressed

Since you reported that Amstrad is stopping the Spectrum +3 I have been in a state of depression. I am now going to have to save up for a new computer. I am sure this is what most owners will be thinking, but I can assure them they are not wrong.

Game producers may say they will keep producing software, but for how long? After this Christmas, I am sure most of the houses will stop Spectrum software and just concentrate on the 16-bit computers.

All right, the user groups will stay loyal, but that is only because they are

specialised for the +3. I would like to see how many of the user groups that started recently (and therefore only have a few members and a couple of disks of software) will still support the Spectrum in a year's time.

I am going to stay a +3 user for now, only because I can't afford a 16-bit. But as soon as I can, then it's bye-bye +3.

However, I will say this has come a lot later than most people expected. People have been saying the Spectrum was finished when the first Atari 16-bits came out, but it has stayed near, if not at the top of the best-selling computer charts.

Oh, and I have written to B Mumford, answering his rather abusive letter.

A Price, Lewes, Sussex

Sounds like you're having a premature panic there Mr P. The Spectrum is far from dead – it's just the +3 that's being discontinued. Sort yourself out a device like the *Romantic Robot Multiface* and you'll be able to keep playing cassette games on your machine with the full convenience of a disk drive.

Software houses aren't going to give up writing and publishing games for the Spectrum – there are squillions of active users out there. My prediction is that there will still be Spectrum games charting NEXT Christmas.

You just don't know how lucky you are Mr Price – I wish there were half as many games for my Mac IIx as there are for your Spectrum +3

H F-W

## ■ Good-Bye Then...

As a one-time Speccy owner, I read with great interest about the death of the +3 (may it now rest in peace). even more interesting was Robin Alway's comments on Amstrad's business practices.

My understanding of economics is that what companies like Amstrad do is to manage the resources of land, labour, capital and entrepreneurship. These together produce goods. No doubt the +3 was making Amstrad a profit, but the resources used to produce and market it can obviously be used in a better way to make the company even more profit.

If the company uses its resources more efficiently, it should be able to guarantee its own future success and the success of other products. In the long term, the termination of the +3 will be a good thing, as it will mean more support for Amstrad's other machines, and hopefully, new products.

It is always sad to see a good computer disappear. I can't think of anything more disheartening to +3 owners than to see their machine dropped (as a CPC owners, I know what that threat is like). But sometimes you have to sacrifice to make future gain.

Robert MacBean, Belfast

A sound appreciation of the principles of opportunity cost there Robert, and a fairly succinct appreciation of Amstrad's probably motivation.



# ULTIMATE AMIGAS

**What hardware should you be looking at to tap the tremendous power lying dormant in your machine? Cade Roux makes some personal predictions for the shape of Amigas to come.**

**A**miga computers, the A500, A2000 and the new A3000, are certainly low-priced routes to a wide range of software applications, but the hardware platform they rest on has remained basically the same for the last five years. However, it now looks like the Amiga market is set for some rapid changes.

So, what will help or hinder the diverse Amiga family in the 90s? What upgrades are available for current Amigas to boost their performance? What can we learn from the PC arena, where programs cater for the lowest common denominator, and what of the future of Amigas on a PC-compatible planet? There are four main areas which require scrutiny:

Processing power is important for the increasingly sophisticated applications being made available to the Amiga user and memory and storage are also crucial to the multi-tasking environment of the future.

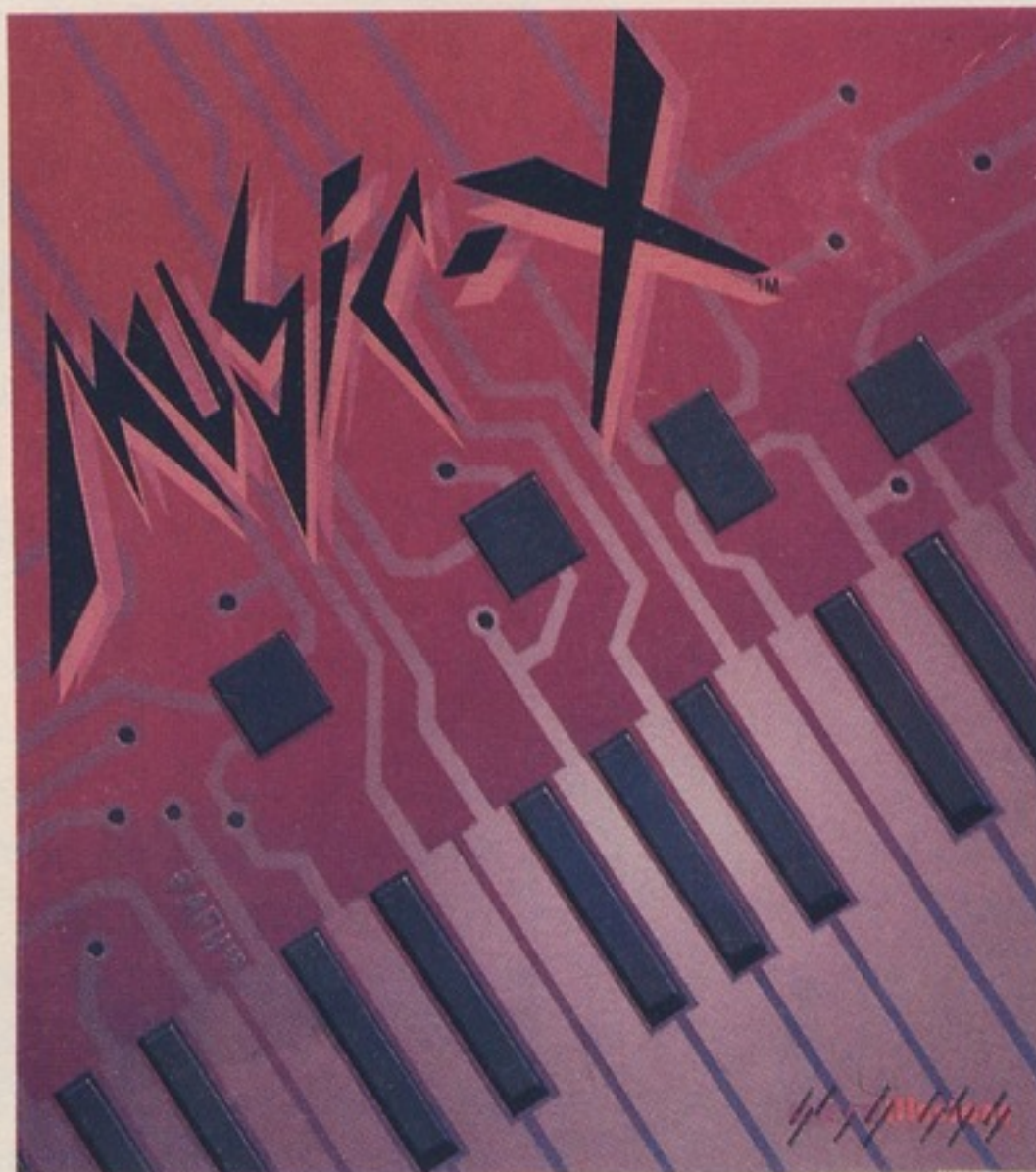
The increasingly popular UNIX operating system (OS) can clearly be considered as a future OS for the Amiga as it relies on a multitasking system.

Finally, graphics capabilities are growing across the computing board so there is a need to look at prob-

lems and solutions for the Amiga in that area.

Fortunately there are four areas in which the Amiga is already a force:

Music - the Amiga family already holds its own on this scene.



• *Music X - the best music program available on the Amiga.*

Business applications - the machines are already great for business applications, being productive and flexible at a comparatively low cost.

Ethernet networking - Amigas offer perhaps the cheapest and most productive networks available.

Software support - with a base of PD software and excellent links with the UNIX and scientific community. Unfortunately though, the A1000 is left out of this analysis, as it is poorly supported for expansion hardware, especially by Commodore.

## THE 32-BIT PROCESS

The inception and then success of Motorola's range of 68000 processor chips in Macintosh, Atari and Amiga computing sent a message to soft and hardware manufacturers. It told them that graphics power would be the key to success in the low-end desktop market, which had previously been dominated by text-oriented PC-compatibles.

Time passes however, and the CPU (Central Processing Unit) of 68000-based has remained unchanged since 1985 and is slow by today's standards.

So, what does the Amiga family have going for it at the moment? And, more importantly, what of the future? The Amiga 500 and the 2000 both have 68000 chips and 16-bit data paths. The new A3000 has a 68030 and a 32-bit data path. The 2500, basically a 2000 with expansion cards already plugged in, only available in the States and some parts of Europe, has a 68020 or 68030. Most processor expansion boards also have 32-bit buses for memory.

For the initiated, memory in the Amiga is divided into two areas; Chip RAM, which can be directly manipulated by the custom chip set (CCS), and Fast RAM, which can only be accessed by the CPU. So, where to go from here?

For a start, 32-bit memory is vital to an 68020 or 68030, as it allows Kickstart to be re-mapped to their increased speed. A good expansion route would be via a Great Valley Products' board. On GVP's boards, with Nibble-mode DRAM (Dynamic Random Access Memory) the 68030's burst mode is implemented, realising tremendous speed increases. With suitable RAM (Dynamic RAM or Static RAM), these boards allow the computer to fly along, without large losses of time for wait-states.

It should be pointed out here that problems exist with synchronous systems, those systems which are linked to the motherboard's clock, and genlocks. These can be eliminated with the newer 'asynchronous' boards.

A3000 owners are already a step ahead in the battle; their machines have 32-bit access to Chip RAM via the data-bus. This distances its CPU from some limitations of the Enhanced Chip Set (ECS), which will hold it back on occasion.

But even the A3000 can be boosted in processing power. Dave Haynie's SetCPU is probably the best way to ensure that the 68020 and 68030 will perform at their best. It detects processor type, re-maps Kickstart to 32-bit RAM and enables the 68030's caches. This can be useful for many games which don't take account of the CPU, alter their code, cause the cache copy, which is not altered, to be different and crash the machine (cause a Guru to the non-lamers among you). Floating point units, also known as math co-processors, such as the 68881 or faster 68882 can also be added for increased zip, but they will only be used when called directly or indirectly through libraries.

A point to bear in mind is, that with increased processing power, memory management will be part of future Amiga operating systems. It is probable that users will need an 68020 (with a separate Memory Management Unit) or a 68030 (which has integral MMU) to use new software.

## MEMORY GAMES

A hard disk allows programs to be quickly accessible without having to be put in RAM, and keeps everything in one place.

Hard drives (or hard disks depending on how you say it)



• *The A590 standard hard drive for the Amiga 500.*

## IN A NUTSHELL

A 1Mb dual-floppy Amiga system is common and plenty for most applications, but graphics, sound, and programming may require much more.

Existing Amiga owners should invest in memory, storage and processing power, if necessary. For new systems, there are three bases, the 500, the 2000, and the 3000.

For the most muscle and room for hard disks, an A2000 and the Great Valley Products' (GVP) 50Mhz upgrade is the only way to fly. For those requiring the Enhanced Chip Set (ECS) and 2Mb Chip in a cheaper box, a machine to replace the A500 (and 2000) is expected soon.

The 3000 offers 32-bit speed, the ECS, and flicker fixer all in one box, with 1Mb Chip or 1Mb Fast RAM, expandable to 16Mb Fast or 2Mb Chip. It is not possible to match its features with any off-the-shelf expansion package.

Unfortunately, the 3000 is not the fastest Amiga, as there are boards available for A500s and 2000s which use the speedier 50Mhz 68030 processors. If processing is a priority, then an A500 with a 50Mhz 68030 CSA board and Static-RAM (SRAM) but without any extra ECS features is a low-cost solution.



are a necessity in the Mac and PC markets; however they are still relatively expensive, and so less popular, for Amigas.

If an Amiga is used for a single function, adding RAM solves most problems, but when working with graphics and sound, it is good to have large and fast online storage space. 20Mb is too small and fills up rapidly. So, if you need a hard disk, a 40Mb drive is a better choice for Amigas running several applications.



• Amiga graphics – ripe for progress.

Drive speed is not too important, although Great Valley Products' (GVP) 68030 boards have built-in controllers which work on the 32-bit bus. Currently, Quantum drives are about the fastest available for the Amiga.

Future versions of the Amiga operating system (OS) will support virtual memory which will require hard disks to store program data when not needed. Other, more exotic storage devices can be useful, and CD-ROMs, WORM (Write Once, Read Many) drives, removable hard disks, and tape streamers are all available. [see the contacts panel for telephone numbers]

### UNIX ON THE AMIGA

AmigaDOS is an efficient multi-tasking OS, but while it tries to act like a mainframe, its limited resources foil it. The next step is to look at a new OS; in my opinion, UNIX systems will figure strongly in the future of desktop computing.

Although we may have reached the point where a desktop micro can run UNIX, it is not comfortable within the limitations of most confined systems. UNIX is big and powerful, (it requires upwards of 4Mb to exist) with considerable initial overhead, but it comes into its own when large resources are being manipulated.

It's a twenty year old, multi-user, multi-tasking OS, perhaps in need of revision in the age of single-user multiple-processor desktop machines. Good news for us is that the newest AT&T UNIX, version 5.4, was first seen running on powerful Amigas. It is likely to be badged Amix and supplied with future Amigas.

A UNIX Graphic User Interface (GUIs) would have far more capabilities than AmigaDOS, but is yet untested on Amigas. So, if GUI's are your bag, a new version of AmigaDOS is the route. For this you should consider investing in the new Agnus, Denise and Kickstart, depending on your chosen applications. These will be necessary for using features of the latest Workbench (version 2.0) which still has advantages over other, non-multi-tasking systems.

### GRAPHICS

In animation and graphics, the Amiga was for a long time king, having been integrated into video work since birth. Unhappily its graphics have not progressed since then. In fact, the visual capabilities on PCs and Macs have surpassed the Amiga. The Amiga Custom Chip Set is the heart, and also the weakness, of any Amiga,

and although Agnus and Denise have great powers, they have nothing on VGA.

Problems lie mainly in the lack of high resolution colour displays and in the speed of operations, so any new chip set will need to be faster if it is to handle any larger and better screen modes.

The A3000 and Workbench 2.0 is the best combination to harness the bulk of the Enhanced Chip Set's strength. For your viewing pleasure a good mark to aim for is 1280x1024, a standard resolution for workstations. Frame buffers, or graphics cards, offer a way for specialist needs.

There is still no 256 colour Workbench to beat Microsoft Windows and this area is ripe for progress. Mimetics' frame buffer (\$600), Amiga Centre Scotland's forthcoming board (under £1,000), and Black Belt Systems' HAM-E (\$300) all offer improvements. The Caligari Broadcast (\$2,000) supports Targa boards on a bridgeboard, but until Commodore makes a move, no significant standardisation will come about.

As we are always being told, standards are important. Just a glance at the many 3D modelling file standards reminds me of the MS-DOS minefield, and it can only be hoped that the example of the International File Format (IFF) standard's success holds out in graphics expansion.

With the extensive use of Amigas in video graphics, there is also hope that manufacturers will take notice of the gap in Amiga hardware for better display graphics for general applications. For example, a way to reconcile video with display graphics is via the new high definition video standard, HDTV which will provide a far higher resolution of computer images than the current NTSC/PAL TV standards. When fully developed this will inevitably influence the Amiga market.

Another hope for the graphic future is that more hardware will be accessible to Amigas running UNIX. Applications running under an X Window/Open Look GUI will also be able to use high-class transputer display controllers.

### BEYOND THE PAST

The future for the Amiga, in the next two years at least, is rosy in business, music and entertainment. It is a versatile and productive machine which can adapt to your needs instead of forcing you to adapt to its.

Cheap PC visuals may force the Amiga out of low-cost graphics, as only UNIX and the associated hard-

### WHERE TO GO

I've mentioned the products, the firms and the prices, but how do you get into contact with the right people? Here's how:

**Great Valley Products (GVP) 50MHz upgrade, A3001 series boards, 68030 boards:** GVP products are available in the UK from Power Computing. Tel. 0234 273000.

**Solid State Leisure: A5000, 20-Card.**  
Tel: 0933 650677

**Bytes & Pieces: For CSA, Ronin and Imtronics boards, and Commodore A2620 and A2630 boards.**  
Tel: 0253 734218

**Calco Software: Quantum drives:**  
Tel 081-546 7256

**Amiga Centre Scotland: for most Amiga needs.**  
Tel: 031 5574242

ware to accompany it look to overcome the Amiga's graphics limitations, albeit at some expense.

Amiga owners should look to the precedents and problems set in the PC world where the successes in building on the model of limited 8088 PCs were marred by the need to harness 386 power; along came incompatibility problems. The spectre of incompatibility and loss of user base are weighty issues for the future Amiga, but the challenge of shrugging off restrictions will be taken up, as it has not been in the PC world, by small and independent-minded users. This will hold true even when the Amiga has past its peak.

My hope is for a Super-Amiga running UNIX (and Amiga/PC/Mac software in windows) with 24-bit graphics, a 32-bit chip set and no limits on Chip RAM. I expect that what are now considered powerful Amiga systems will take a back seat even to MS-DOS graphics systems. They could even fade out of graphics totally unless significant improvements to the display available for AmigaDOS software are made. However, I also expect that in five years that my Amiga will still be in use next to my true UNIX machine, minding its own business. ■

### UPGRADING THE A500, A2000 AND A3000

#### UPGRADE THE A500 IN PROCESSING SPEED

To upgrade the A500 processor, the 7MHz 68000 must be removed and replaced with one of greater speed, which again causes problems with games dependent on the cycles for timing. Because of hassle factor, the 68020 is the wiser upgrade choice in my opinion.

If you own an A500 and have some cash the throw around, the options are: the forthcoming A5000 from Solid State Leisure comes with a 16MHz 68020, 1 to 4Mb DRAM, and up to 50MHz 6881 or 882 math co-processor). Also from SSL is the 20-Card, again with a 68020 but with lower performance. You could try CSA cards, high speed 68030 with SRAM and up to 50MHz 6882 are available from Bytes & Pieces.

#### UPGRADE THE A2000 PROCESSOR

To upgrade a A2000 processor, a card is easily slotted into the motherboard's CPU slot. For those tricky games which rely on the 68000 clock, it may also be possible to revert to 68000 control with a disable switch.

The options for A2000 owners are: The outstanding GVP A3001 series boards available from Power Computing. These come with 68030 processors, 6882 co-processors, 0 (no on-board memory) 4 or 8Mb DRAM at 28, 33 and 50MHz respectively. They also have burst mode up to 33MHz and an onboard AT/IDE controller for two 40/80/200Mb hard drives. You could take a look at the CSA 68030 boards, Ronin and Imtronics boards, and

Commodore A2620 and A2630 boards.

Great Valley Products offers an upgrade deal where they take CPU-slot boards for a new A3001. Their range represents the most mighty and solidly engineered of Amiga add-ons, out performing the others.

#### UPGRADE THE A3000 PROCESSOR

For A3000 owners, a 68040 board is on the cards, as are RISC boards. Both will allow the A3000 to compete with the power of an expanded A2000.

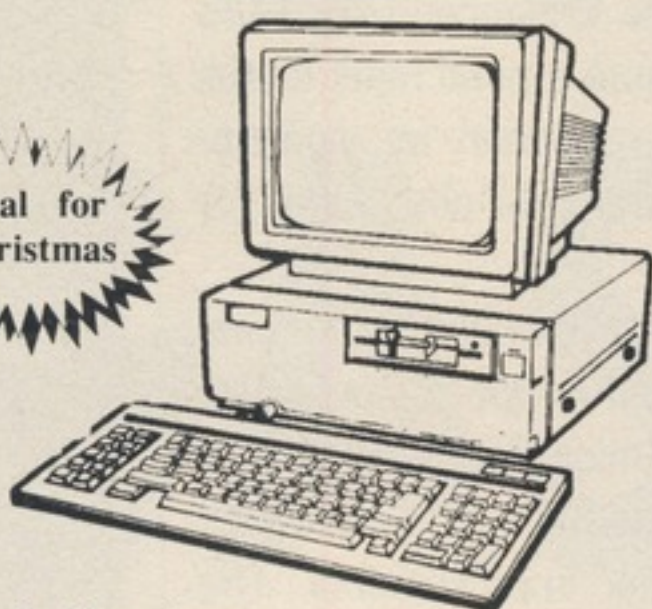
Some software may not be written with multiple Amiga processors in mind, but there will be no lack of raw Amiga computing power to match a 486 PC or a Mac II.



# UK HOME COMPUTERS

## PC/XT FOR UNDER £300

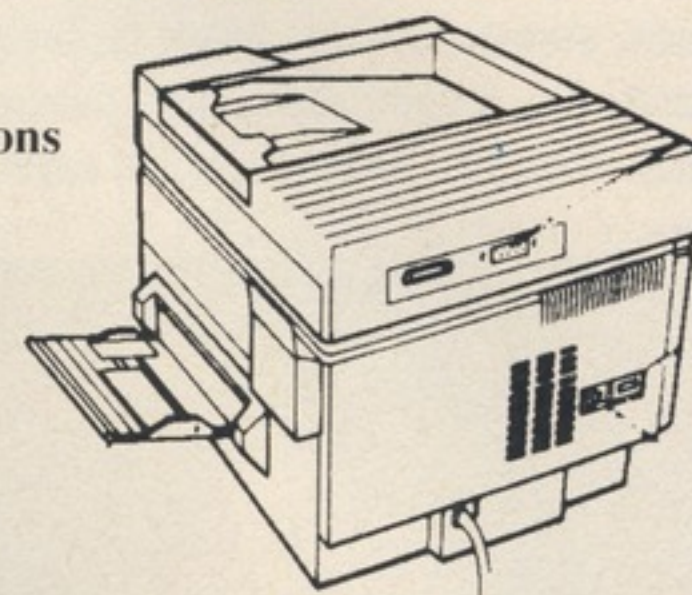
8088 Processor @ 8 MHz, Serial & Parallel Port. 8087 Socket.  
1/2 Mb On-Board RAM (Expandable)  
1X360k 5.25" FDD (Space for second)  
Mono/Colour Graphics Card  
2 Conventional Expansion Slots  
Space for Internal Hard Disk Drive  
MS-DOS 3.3 & GW-BASIC 3.2  
102 Key Keyboard made by EPSON  
12" Mono Monitor (New/Ex-Display)



**£299.95p** inc. VAT & Carriage

## CITIZEN LASER PRINTER

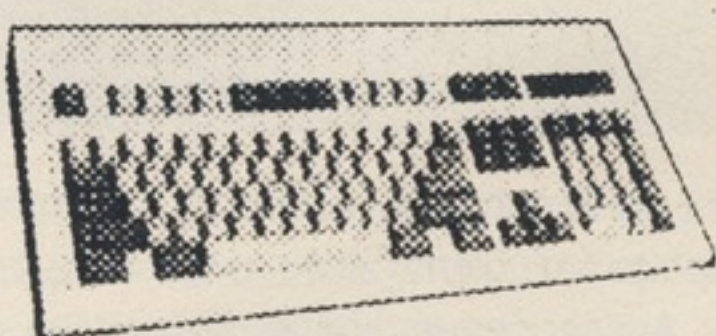
10 Pages per Minute  
1/2 Mb On-Board Memory  
Epson FX/ Proprinter & Diablo Emulations  
Parallel & Serial Interface  
300X300 dots per inch  
Landscape & Portrait Printing  
Toner Cartridges from £18.00p  
12 Month On-Site Warranty  
Model:- Overture 110 +



**£804.95p** inc. VAT & Carriage

## PC XT/AT KEYBOARDS

102-key keyboard made by EPSON. Full UK Spec. with 5 pin connector. Adjustable feet allow an elevated typing position. Self-sensing between XT or AT operation. Normally retailing at over £100.00p



**£39.95p**

Postage & Packing £4.05p

## "WINDOWS"

Microsoft's WINDOWS 286, Ver 2.1. Full manuals, 5.25" disks. Brand New & unregistered. Currently selling for approximately £55.00p plus VAT.

**£29.95p** plus £3.05p Postage

**WINDOWS 386 Ver. 2.1**

**£49.95p** plus £3.05 Postage

## "FIRST FRAMEWORK"

Made by ASHTON-TATE. A Complete integrated package for the Amstrad PC 1512 or PC Compatibles. The package consists of a word-processor, database, spreadsheet, & graphics programs. System requirements are 2 5.25" disk drives & a minimum of 360k RAM. MS-DOS 2.0 or higher. This package is all that you would expect from a company like ASHTON-TATE.

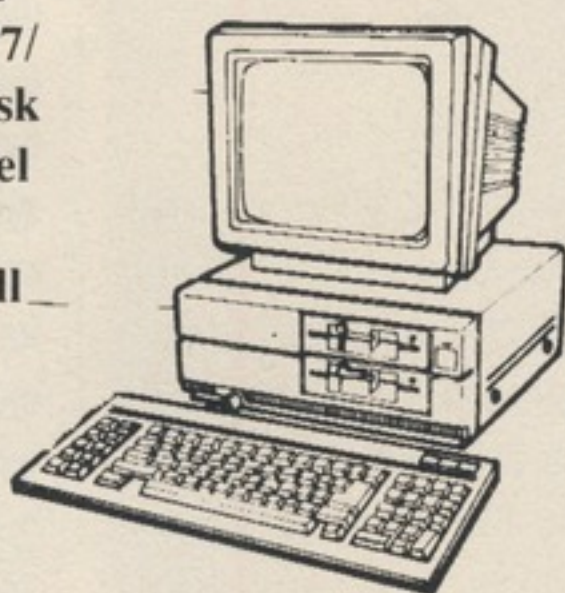
**£24.95p**

inc. VAT & Postage

## SAMSUNG PC/XT's

Model SPC 3000. 512k RAM (Expandable), Full-Size Keyboard, MS-DOS 3.2 & GW-BASIC. 4.77/8 MHz Clock Speed. Battery Back-Up. 5.25" Disk Drives, Hercules Display Card, RS232 & Parallel Ports, 8087 Co-Processor Socket, 90 Watt switched Power Supply, 4 Expansion Slots. Small Foot-Print. FREE Ex-Display Mono Monitor.

Single Disk Drive (512k) **£419.95p**  
Double Disk Drive(512k) **£449.95p**  
Single Disk Drive, 20 Mb Hard Disk Drive (640k RAM) **£589.95p**

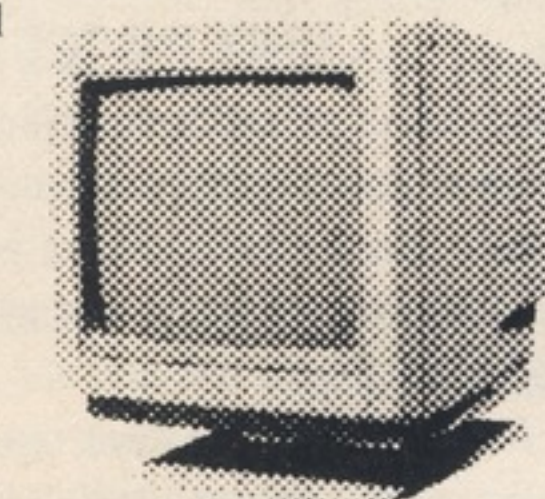


inc. VAT & Carriage

## EX-DISPLAY MONITORS

Made by SAMSUNG. Condition as new. Tested prior to despatch. These monitors have generally had less than 10 hours use.

12" TTL Mono	£49.95p
12" VGA Black/White	£69.95p
14" CGA Colour	£99.95p
14" CGA/EGA Colour	£129.95p
14" VGA Colour	£169.95p
14" Multi-Synch Colour	£199.95p

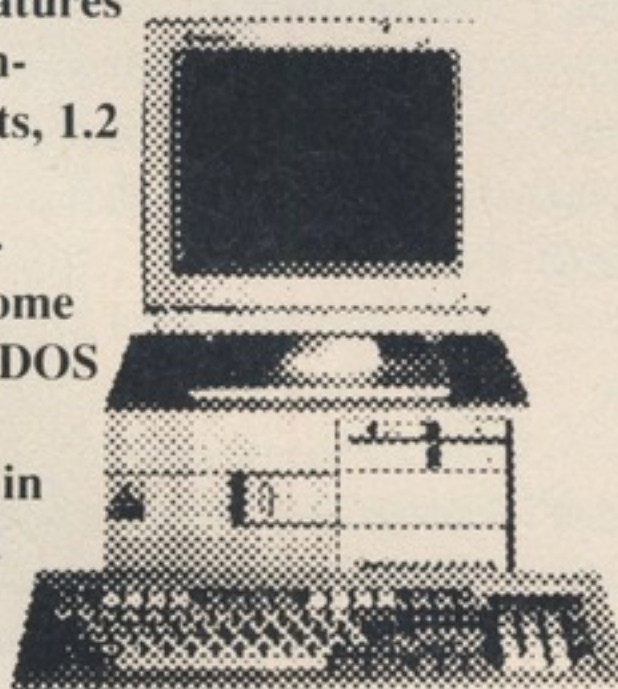


Tilt & Swivel Base and Data cable included

The above prices include VAT, but please add £10.00p per monitor for overnight carriage.

## PC/AT 286-OFFER 1

Made by SAMSUNG. Model MFC 6000/1. Usual selling price around £800.00p plus VAT. Features include 80286 processor @ 10MHz. 1Mb On-Board RAM (Expandable), 6 Expansion Slots, 1.2 Mb 5.25" High Density Floppy Disk Drive, (Room for 2 additional drives), 102 key keyboard, battery back-up, Hercules/Monochrome graphics Card, Serial & Parallel Ports, MS-DOS 3.2 & GW-BASIC. Ideal computer for the enthusiast who wants to add to their system in their own time. This item is very limited and cannot be repeated.

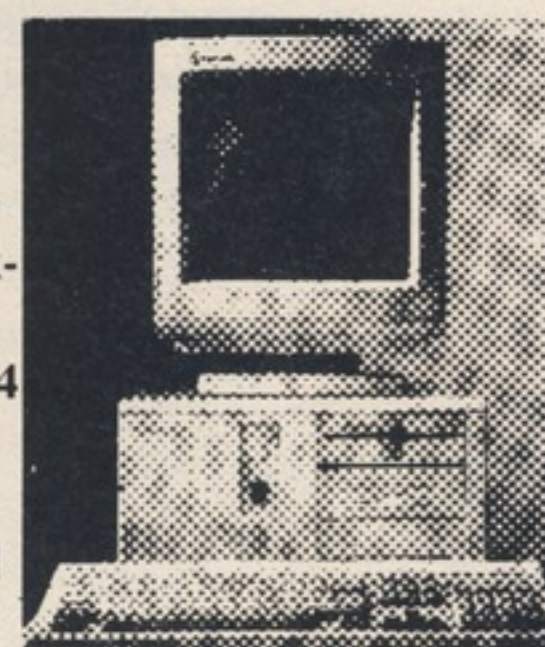


**£499.95p**

This price includes VAT, but please add carriage £10.00p. (Note:- This offer doesn't include a monitor.)

## PC/AT 286-OFFER 2

Made by SAMSUNG. Model SPC 6512, currently selling everywhere at £1150.00p plus VAT. Features include 80286 processor @ 12MHz, 1Mb On-Board RAM (Expandable), Twin High Density Floppy Disk Drives, (1X5.25" & 1X3.5"), 102 key UK Keyboard, Maths co-processor socket, 3X16 bit expansion slots, 2X8 bit expansion slots, Hard disk controller, Battery Back-Up, Optima/1024 VGA Graphics Card, MS-DOS 3.3, GW-BASIC, & Ex-Display 12" Samsung VGA Black/White Monitor. This machine is very powerful & well-specified. Again, limited stock so order early.



**£699.95p**

inc. VAT & Carriage



VISA/ACCESS orders welcome. Prices subject to change without notice. All transactions are subject to our standard conditions of Sale, available upon request. Personal callers welcome by appointment. All prices include VAT. All goods Brand New unless expressly stated otherwise



## UK HOME COMPUTERS

82 CHURCHWARD AVENUE,  
SWINDON, WILTS, SN2 1NH.  
**0793 695034**



# 2MB PORTABLE ST AMIGA A590 CLONE ST SHAREWARE NEW AMIGA WORDPERFECT TOUCH UP TOUCHED UP AMIGA WORLD TECH

ALL IN WHOLE WIRED WORLD ON PAGE 32

## SHOPPING EXPRESS

THE VALUE-PACKED GUIDE TO YOUR MACHINE AND MORE

### CONTENTS

<b>AMIGA</b> .....	18
Does B2000 + A500 = 1500 PHC ?	
<b>ARCHIMEDES</b> .....	19
Three new DTP & music packages	
<b>CPC</b> .....	20
Fancy a spot of time travelling?	
<b>C64</b> .....	22
Join the crackdown on Columbian drug barons	
<b>PC</b> .....	23
Focus on a heavenly new Star	
<b>Spectrum</b> .....	24
<i>Guardian Angel</i> - the best beat-em-up?	
<b>ST</b> .....	25
Where to go for the best demos	
<b>MACINTOSH</b> .....	27
The first outing for a brand new column	
<b>The PD Column</b> .....	62
The best in free software	
<b>Whole Wired World</b> .....	32
Steve Gold at large	
<b>Express On-line</b> .....	56
The weekly bulletin board and user group guide	
<b>Circuit City</b> .....	60
Off-the-shelf projects from a death ray to a Geiger counter	
<b>Centrefold</b> .....	36
Meet Tim Smith and win an Atari Lynx console	
<b>Tech Tips</b> .....	35
Advice on your problems	

## FREE! Reader Ads Order Form

PLEASE TICK THE CATEGORY YOU WANT YOUR AD TO GO IN:

- ☐ HELP OFFERED  
☐ SERVICES  
☐ ANNOUNCEMENTS

- ☐ GOODS WANTED  
☐ VIRUS WARNING  
☐ MINI-TIPS

- ☐ BUGS DISCOVERED

- ☐ EVENTS

- ☐ FOR SALE

- ☐ PERSONAL

NAME \_\_\_\_\_

TEL: \_\_\_\_\_

ADDRESS \_\_\_\_\_

WRITE YOUR FREE AD HERE

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Send your reader ads to:

SHOPPING EXPRESS READER ADS,  
30 MONMOUTH STREET, BATH BA1 2BW

### Terms and conditions

- Sorry, NO trade ads. All reader ads must be from private individuals
- We cannot vouch for the quality of goods and/or services offered in this section. all ads are accepted in good faith.
- We reserve the right to amend or refuse reader ads at our discretion
- No pirated software may be sold through these columns. Any reader being offered non-originals should contact us
- We cannot guarantee that reader ads will appear in particular issues of Express
- The following declaration should be signed:

My advertisement conforms to the terms above and is legal, decent, honest and truthful

Signed \_\_\_\_\_



**SCOOP  
PURCHASE****RANK XEROX**  
**LASER PRINTER 4045R**  
With inbuilt photocopier

\* 10 pages minute

- \* 512kb & 1Mb RAM versions
- \* Emulations: HP Laserjet +, Diablo 630 8 Xerox 2700, (FX80/IBM pro available)
- \* Resident Font range
- \* Plus 4 Font Cartridge Slots
- \* Fonts Cartridges & Memory upgrades available
- \* Downloadable Fonts (from Floppy disc via PC)
- \* Interfaces: Parallel (Centronics) & Serial (RS232)
- \* Digital status display
- \* Test Print out on power-up
- \* 250 sheet input tray
- \* 'Non-Cartridge' inexpensive Toner
- \* 4 Toner refills supplied - 16000 copies inclusive!
- \* Easy to set-up Configuration cartridge
- \* Accessory Pack included - full of useful extra's

**SUITABLE FOR MOST PC  
APPLICATIONS**3 months on-site warranty, by Rank Xerox  
Maintenance Contracts and Service Available**FROM £650 + VAT**

NEXT DAY DELIVERY &amp; INSURANCE £30 + VAT

ORDERS TAKEN BY PHONE USING  
ACCESS OR VISA FOR NEXT DAY DELIVERY**PHONE: 081 330 7533****FAX: 081 330 4838****COMMONSIDE HARDWARE  
SERVICES**Unit 13, 193 Garth Road, Morden,  
Surrey, SM4 4LZ**Amiga****2000 + 500 = 1500?**

I bet you're all pretty excited about the new Amiga 1500, right? It seems at last that Commodore has produced the machine that we've all been crying out for. But hang on there a minute, for there seems to be a darker side to Commodore's thinking. I can exclusively reveal that this brand spanking new machine is in actual fact an Amiga 2000! Yes folks, the Amiga 1500 is an Amiga 2000. No mistake about it. OK, it certainly seems to look like an Amiga 2000, but it can't be a 2000! Can it?

Well, according to several well known developers close to Commodore, the machine is identical to the existing Amiga B2000 model. Every chip, key, expansion slot and just about everything else is identical to the old faithful 2000. But why call it an Amiga 1500? Why not just drop the price of the real 2000? The answers to all these questions (and more) can now be revealed.

First, a question. Why do computer manufacturers slash prices on their machines? Answer - to sell as many as possible. But why, if Commodore is trying hard to push the A3000, is the 2000 getting such special treatment? Answer - because it's had its day. Yes folks, after little more than three years of existence, I can exclusively reveal (that is unless the news hounds on *Express* beat me to it) that the Amiga model 2000 is to face the chop. No one is sure when this will happen, but it seems almost certain that the day of reckoning is drawing near (early next year is the informed opinion).

With the impending release of the A500 Professional (complete with *ECS* and *Workbench 2.0*), Commodore seems to think that the 2000 is no longer needed. What will fill the resulting gap is unknown, but it is rumoured that Commodore may be considering a cut-down version of the 3000. But, as Commodore would say, this is nothing more than speculation and hype.

According to one developer in particular, when he spoke to several representatives of Commodore, they seemed to view the machine as something of a joke. When remarking on the fact that very little thought seemed to have been put into the machine, a CBM representative retorted "Rubbish! It took us at least a whole Saturday afternoon to draw the machine's badge!"

So is it worth buying the new(?) Amiga 1500? Well the machine may be up for the chop, but let's face it, the complete bundle consisting of the 1500 plus loadsa software is a damned good

deal (a bargain, missus!). If it wasn't for the fact that I'm saving for an A3000, I'd buy one today!

**THE CONSOLE QUESTION**

Commodore may have just released its contender for the thriving games console market, but it seems that Commodore may still produce an Amiga-based games console. According to a source, Kelly Sumner (Commodore's European Sales Manager) let slip that the company had not ruled out the possibility of producing an Amiga-based games console along the same lines as the recently released C64GS. Unfortunately, Kelly went on to say that even if the machine was to be produced, it wouldn't happen for a long time yet (perhaps even years).

This is hardly surprising, as the release of a games console based around Amiga technology would be sure to steal sales from Commodore's soon to be released CDTV. Although the CDTV would still sell as a multimedia system for education and presentation etc, a vital chunk of the home market would be tempted away from CDTV in favour of the Amiga GS.

**TETRIS BLOCKED!**

It had to happen sooner or later. With all the PD versions of *Tetris* floating around the various libraries, it was only a matter of time before someone stepped in and put a stop to it all.

According to *PD News*, Spectrum Holobyte (who own the US rights to *Tetris*) has requested Fred Fish to remove all *Tetris* clones from his vast library of PD titles. To date, there are six different versions of *Tetris* within Fred's library, all of which will almost certainly have to be removed from circulation.

On the subject of risky PD, it seems that several libraries in the UK are distributing an eight channel *Sound Tracker*-like program called *Oktalyser*. According to GTI GmbH in West Germany, *Oktalyser* is a commercial product which sells for £35. The company has therefore requested that all libraries that distribute it withdraw it from circulation immediately. So there!

**NEW O/S SOON**

Feeling jealous of your friend with the A3000? I'm not surprised. Most of what their machine has to offer can also be bought for the existing range of Amigas; but there's still one thing that the A3000 has to offer that the others don't - *Workbench 2.0*.

The good news is that you haven't got long to wait. According to sources close to Commodore, the company



plans to make OS version 2 available to the rest of us early next year. Now that Beta testing is virtually complete, it's only a matter of ironing out those last minute bugs.

Unlike previous OS upgrades, it seems certain that upgrading is going to be a fairly costly affair. Getting OS 2.0 up and running won't just be a case of buying a new Workbench disk – you're going to need both the ECS and the new 512K Kickstart ROM installed before you can start to take full advantage of what WB 2.0 has to offer. This will require you to send your machine off to a registered Commodore engineer who will undertake the necessary work.

So is it really worth upgrading to 2.0? Well, that depends entirely upon you. If you use your Amiga solely for playing games (which isn't necessarily a bad thing), then I'd advise you to stick with what you've already got. However, for the rest of us, Work-

bench2.0 and the Enhanced Chip Set is a recommended upgrade. Workbench 2.0 is just fantastic – after little more than a few hours use you'll never want to go back to 1.3

## SPREADING THE WORD

Word processors can be jolly expensive things, but help is at hand with a new WP that will cost you little more than the price of a disk. Included on the latest batch of Fred Fish public domain disks is a PD word processor called *TextPlus*. Previously, the only program of this type that was available within the PD libraries was a rather quirky program called *WordWright*.

*TextPlus* is available within the 'New Home Business' and 'HomeManagement' PD packs available from that well respected supplier of all things PD, George Thomson Services. GTS can be raised from the mist of the Scottish Highlands by phoning 077082 212.

Jason Holborn

# Archimedes

## ON A SERIOUS NOTE

Software definitely appears in waves. As I pointed out last week, the current trend for the more serious side of computing does seem to be continuing – I've only seen two games this week, and one of those is really aimed at the education market! Perhaps there's some underlying biorhythm-like system and in a month's time we will be once again bombarded with the sound of laser fire and all-round destruction. I'd therefore like to take advantage of this (relative) calm to report on a host (well, three really) of 'presentation' programs: two DTP and one music.

## SECOND TIME AROUND

How can you have a DTP program that is as simple for someone who has never used a word processor, and at the same time is as versatile as it can be to cope with the high demands of something more professional? Simple – you have two programs. As I mentioned last week, Computer Concepts has done exactly this with *Impression*. Two flavours are now available: *Junior*, which I dealt with last week and *Impression II*, which is really what-version 1 should have been. *Version II* gives the overall impression (sic) of being much more polished and in general easier to use than its predecessor. Perhaps the best example of this is the addition of effects as well as styles. These are typeface, font height, justification etc; changes that can be applied without the need for setting up a separate style.

The font selection menu is now hierarchical – the first sub-menu contains the font base-name, e.g. 'Corpus', 'Homerton', and the second the various styles, e.g. 'Medium', 'Bold, Oblique'; this at least delays the problem of how to select fonts when you've got 100 or so of them. Frames can be grouped together temporarily or permanently and subsequently moved around. A 'repeat frame' has been added, once placed on a page it will appear on all the rest other pages in the chapter – a bit like master pages. Rulers can now be attached to a given style or be a style in their own right, precise position of margins and tabs can be achieved via a sub-menu.

The style menu itself has grown a bit; the additions being a 'keep together' parameter to help stop headings being put at the bottom of pages and a facility to aid in lining up text columns in different frames. Graphics, both draw-files and sprites, can be rotated within their frames, this requires an additional 20K module to be loaded, but this provides greyscale dithering. The speed of the rotating has to be seen to be believed – eat your heart out *IPaint*. And if all this wasn't enough: the text flow can be shown; chapters can start on left or right pages; the date and time can be inserted (but no approximate time like in *DTOOffice*, boo!); the print menu has a separate setup section containing all the oddities you only use occasionally; all keyboard shortcuts are shown and you can even make the caret flash! ➤



## DATAPEX COMPUTERS LTD.

129 Bath Road,  
Slough,  
Berkshire,  
SL1 3UW

19 High Street  
Swindon,  
Wiltshire

Tel: 0753 35557 Tel: 0793 488448

**SHOWROOM**  
open:  
Mon - Fri  
9.30 - 5.30  
Saturday  
9.30 - 4.30  
**MAILORDER**  
Consumables  
£1.50  
Hardware  
£8.00  
Prices  
excluding VAT

## AMIGA A500 HARDWARE

Amiga A500 Batman Pack  
+ free box of disks .....£317  
Amiga A500 Flight of Fantasy +  
box of disks .....£317  
Amiga A500 Screen Gems  
Packs + free disks .....£317

## SPECIAL OFFER

Amiga A500 1Mb Pack -Choose  
any Amiga A500 from above and  
we will give you 512K RAM +  
clock, mouse mat at only ....£355  
Amiga Class of 90's.....£439

## ATARI COMPUTERS

Atari 520STFM discovery pack  
includes 4 games.....£240  
Atari 520 STE Turbo Pack includes  
basic STOS and 7 games.....£310  
Atari 1040 STE extra pack includes  
ST Words, ST Calc, ST Basic, ST  
Graphics, Hyper-Paint, STOS, 1st  
Basic, Print Game .....£399

## AMIGA/ATARI DRIVES

1 Meg 3.5" internal.....£49  
1 Meg 3.5" external.....£60  
1 Meg 5.25" external.....£90

## ACCESSORIES

512K Ram + clock .....£45  
Joystick.....£10  
10 Blank disks in library box .....£6  
Mouse Mat.....£3  
Naksha Mouse.....£32

## MONITORS

Philips CM8833 - Colour Monitor  
+ leads only .....£189  
SM 1224 (Atari) .....£205  
SM 124 (Atari) .....£85

## PRINTERS

Star LC10 Mono .....£129  
Star LC200 Colour (9 pin).....£180  
Star LC24 200 (24 pin) .....£219  
Star LC24 200 Colour .....£259  
Panasonic KXP1124+ lead ....£199  
Panasonic KXP1624.....£329  
Citizen 120D + .....£120  
Citizen 124D .....£189  
Citizen Swift 24 + Colour  
Upgrade.....£265  
Citizen Swift 9 + Colour  
Upgrade.....£185  
Epson LX400 .....£526  
Epson LQ400 (24 pin) .....£199  
Epson LQ 500.....£269

## RIBBONS

PLEASE CALL FOR PRICES

# YOUR OWN PD/SHAREWARE LIBRARY

FOR ONLY  
**£29.95**

OVER 750 OF THE BEST PD/SHAREWARE  
PROGRAMS/FILES FOR IBM AND COMPATIBLES

Using the very latest archiving techniques, together with an easy extraction facility, we have compressed what would normally be supplied on 40 or 45 disks on to a 12 disk set.

All the most popular programs are there, including Galaxy, PC-File, As Easy, PC Write, Power-Menu etc.

Graphics, Accounts, Games, Printer Utils, File Utils, Disk Utils, Tutorials, Programming Languages, you name it and it's there.

A program at your finger tips for all occasions.

BECOME a power user.

No extra charge for 3.5" Disks

Please add £2.00 Post & Packing. Cheques or postal orders.

**P C LINDLEY (SOFTWARE),**

101 FRANCIS STREET, CHADDESSEN, DERBY DE2 6DE  
TELEPHONE: (0332) 43721



**POST EXPRESS**

All prices include VAT & Delivery  
All computers are genuine UK specification.  
All computers include a FREE HOLIDAY PACK.  
Proprietor: Mark A Cameron.

Please make cheques/P.O.'s etc  
payable to POST EXPRESS

POST EXPRESS,  
HILLCREST HOUSE, SUITE 3,  
49A VICARAGE ROAD,  
LONDON E10 5EF  
TEL: 081 518 7494 9am - 11pm

☆ **FREE 2 YEAR WARRANTY WITH ALL COMPUTERS BELOW!** ☆

**AMIGA 500 SCREEN  
GEMS PACK ★**

Amiga 500 .....£399.99  
Days of Thunder .....£24.95  
Shadow of the Beast .....£24.95  
Back To The  
Future II .....£24.95  
Knight Breed .....£24.95  
Deluxe Paint II .....£49.95  
AND MORE!  
**TOTAL RRP  
OVER £600.00**

**£364**  
OUR  
PRICE

**AMIGA 500  
BATMAN PACK ★**

Amiga 500 .....£399.99  
Deluxe Paint II .....£49.95  
Interceptor .....£24.95  
The New Zealand  
Story .....£24.95  
Batman The Movie .....£24.95  
AND MORE!  
**TOTAL RRP  
£524.00**

**£364**  
OUR  
PRICE

**AMIGA 500  
FLIGHT OF FANTASY ★**

Amiga 500 .....£399.99  
Deluxe Paint II .....£49.95  
F29 Retaliator .....£24.95  
Rainbow Islands .....£24.95  
Robot Monsters .....£24.95  
AND MORE!  
**TOTAL RRP: £519.79**

**£364**  
OUR  
PRICE

**AMIGA 500 CLASS OF  
THE 90'S PACK ★**

Amiga 500 .....£399.99  
Educational s/w .....£660.00  
Upon registration each  
purchaser will receive a file  
containing:- Over 200  
pages of advice, guidance  
and worksheets relating to  
the National Curriculum and  
lots more!  
**TOTAL RRP £1054.48**

**£529**  
OUR  
PRICE

**ATARI STFM  
DISCOVERY PACK ★**

ATARI STFM .....£299.99  
Bomb Jack .....£24.95  
Carrier Command .....£24.95  
Outrun .....£24.95  
Space Harrier .....£24.95  
ST Tour .....£49.95  
Discover the ST .....£14.95  
Control ACC .....£9.95  
Emulator ACC .....£9.95  
First Basic .....£24.95  
Neochrome .....£29.95  
STOS The Games  
Creator .....£29.95  
AND TONS MORE!  
**TOTAL RRP: £569.48**

**£264**  
OUR  
PRICE

**ATARI 520 STE  
SUPER POWER PACK ★**

Atari STE .....£399.99  
**ENTERTAINMENT/  
PRODUCTIVITY S/W**  
Afterburner, Buggy Boy,  
Double Dragon, Gauntlet II,  
Outrun, Pacmania, Predator,  
R-Type, Space Harrier,  
Super Hang-On, Xenon,  
Black Lamp, Bomb Jack,  
Bombuzal, Eliminator,  
Mousetrap, Nebulus, Star  
Goose, Star Ray, First  
Basic, Music Maker,  
Personal Organizer  
AND PLENTY MORE!  
**TOTAL RRP: £1009.94**

**£364**  
OUR  
PRICE

**ATARI 1040 STE SUPER  
POWER PACK ★**

Atari 1040 STE .....£499.99  
Arkanoid II, Ice Palace,  
Black Lamp, Buggy Boy,  
Chopper X, Eddie Edwards  
Ski, Ikari Warriors, Marble  
Madness, Quadralien,  
Ranarama, Return to  
Genesis, Road Wars,  
Seconds Out, Starquake,  
Olympics, Test Drive,  
Thrust, Thunder Cats,  
Wizball, Xenon, Zynaps,  
Personal Organizer and  
much more!  
**TOTAL RRP £953.97**

**£444**  
OUR  
PRICE

**ATARI 1040 STE  
HOME/BUSINESS PACK ★**

Atari 1040 STE .....£499.99  
Wordprocessor .....£49.95  
Database .....£49.95  
Spreadsheet .....£59.95  
Business Graphics .....£39.95  
First Basic .....£49.99  
S.T.A.C .....£39.95  
Hyper Paint .....£24.99  
Prince .....£24.95  
AND PLENTY MORE!  
**TOTAL RRP: £839.71**

**£449**  
OUR  
PRICE

Please phone or write to us for  
your free catalogue. There are  
some terrific bargains  
to be had:

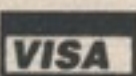
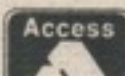
**AMIGA 2000 UP TO  
£500 OFF**

**ATARI MEGA ST UP TO  
£300 OFF**

**STACY UP TO £200 OFF  
TEL: 081-518 7494**

**ONCE BYTTEN**

39 Marling Way  
Gravesend  
Kent DA12 4DW  
Tel: 0474 567964 Fax: 0474 537172  
Mon-Sat 10am-8pm Callers by Appointment  
**FLOPPIES WITH FREEBIES !!**

**PROFEX**

BUY AN NEC 3.5" 880K AMIGA EXTERNAL DRIVE FOR ONLY **£59.95**  
INC. VAT AND GET X-COPY II V2.9 & HARDWARE FREE!!! Hurry, hurry,  
hurry!

**PC SOFTWARE BARGAINS**

LOCOSCRIPT PC (2 ONLY) **£69.00** DESKPRESS PC (2 ONLY) **£199.99**

**PROFEX CM14S PLUS**

This superb monitor for Amigas & Atari ST is built in Italy to West German specifications. It has stereo speakers built-in and a Tilt & Swivel base. Resolution figures are the same as Commodore 1084S/Philips 8833. The price is only £199.95 including VAT & Amiga lead.

**NEW 'CORPORATE' MACHINES FROM AMSTRAD**

At last! A proper open architecture PC from Amstrad. Metal cased. Available as XT, 286 or 386SX processor with 3.5" or 5.25" FDD, and Hard Drives.

Prices start from £529 + VAT for the PC3086 Single Drive Mono

Our Selection:

The PC3286 AT with 40Mb HDD and High Res Colour Monitor £1099 + VAT

**SECONDHAND**

All secondhand equipment has been fully checked and is offered with a three month guarantee unless otherwise stated.

Amiga B2000	<b>£550.00</b>	XT Bridgeboard	<b>£125.00</b>
Hand Scanner PC	<b>£99.00</b>	Commodore MPS803	<b>£69.00</b>
Seikosha SP180VC for CBM	<b>£79.00</b>	Commodore 64/C2N	<b>£79.00</b>
Psion Organiser XP	<b>£59.00</b>	Kodak Diconix	<b>£179.00</b>
Epson LX800 printer	<b>£99.00</b>	IBM 30Mb HDD	<b>£125.00</b>

**WANTED: WE DESPERATELY NEED GOOD USED PC AND AMIGA COMPUTERS AND PERIPHERALS. WE WILL PURCHASE FOR CASH, OR GIVE YOU EVEN MORE IN PART-EXCHANGE.**

Ring Keith McGovern for a quote now.

**PLEASE NOTE**

All the above prices (New & Secondhand) include VAT at 15% unless stated. Carriage is extra: All items in this advert - £2.50 except computers and monitors which are £8 per box Courier (Maximum £24.00)

All secondhand items please ring for carriage quote.

I've only had the use of a slightly pre-release version 1.98 and I've heard that the few 'features' I've found will have been removed for the final release. All in all a good step in the right direction, my only complaints are that you still cannot easily repel text from graphics and guide frames can't be seen on 19-inch mono monitors.

While on the subject of Computer Concepts, *Equasor* is in its final testing and should be available in a couple of weeks. More details then! Computer Concepts is on 0442 63933.

**POSTER PAINT**

Although not truly a DTP package, 4Mation's *Poster* does for *!Draw* what *!Impression* did for *!Edit*. It is really a text manipulator, and although primarily designed for creating posters, it could be used for anything from a business card to page layout. There is no facility for drawing or typing in large quantities of text to display in columns - you have to use *!Draw* and *!Edit* for this - what *Poster* does provide is a wealth of methods for bending, warping and twisting draw files and short (up to 250 character) messages. Text can be made to follow a straight or curved path or squeezed into a 'mould'. Moulds are a special sort of drawfile that contains two or four lines indicating how the text should be distorted. This allows no end of variety of bulges, curves and kinks. The same effects can be applied to drawfiles as well. Objects can also be stretched or rotated in much the same way as *!Draw*. Borders, or simple lines, ornate squiggles or even dragons, can be added to any object.

*Poster* intelligently divides the final poster up into sections when printing, complete with trim marks, which means you can create pages as big as you want! A number of fancy fonts are provided, courtesy of the Electronic Font Foundry, most of them being well suited for the generation of eye-catching posters but not for much else! Unfortunately, the font selection menu suffers from the old problem of what to do when there are lots of fonts available - I only get up to halfway through 'N'.

The only slight annoyance is that there is no 'snap to grid' option, despite

the inclusion of a grid system. Very strange words alone cannot illustrate the type of output possible, quite literally your own imagination is the limit. The manual (printed on recycled paper) contains a few simple techniques and sample outputs, but *Poster* really falls into the 'suck it and see' category. Full marks to 4Mation for an excellent package.

4Mation is on 0271 45566

**THE SOUND OF MUSIC**

The latest release from Clares is *Rhapsody*, a music notation program, and is really rather good. If you've been used to Acorn's *Maestro*, you should have no trouble at all with *Rhapsody*. Notes, rests, accidentals and a host of other musical symbols such as trills, triplets, tie and repeat marks can be positioned on up to 24 staves. Staves can be percussive, joined together from two-part sections for piano or grouped for an orchestral score. Each staff can have one or two musical parts on it, distinguished by the direction of the notes' tails. *Rhapsody* intelligently 'beams' quavers etc. together, although this can be manually overridden. As well as notes, tempo and volume changes can be made and even crescendos and accelerandos can be dealt with.

Text can also be added, this can be used for playing instructions or song lyrics. As all good word, sorry 'music', processors should have, *Rhapsody* allows blocks of notes to be moved, deleted or copied. You can also shift the notes up or down the staff, either 'stupidly', by a number of lines, or intelligently transposing them by a number of semitones.

Playback is achieved either through the internal speaker (external amplifier) or via MIDI. A facility for capturing and transcribing MIDI data has also been included, but as I have no MIDI keyboard, I cannot report on the effectiveness of this! The best bit of *Rhapsody* is the printout. You can print either one staff or the whole score at one of seven scale factors, landscape or portrait. The output is even previewed in a window before being printed via one of the standard RiscOS drivers.

Clares is on 0606 48512.

**Ken Coumarin**

**PC**

**SAD SPECTRUM**

It's a bit sad for Spectrum owners that Amstrad should decide to pull the plug on the Plus 3, but it's quite good news for those buying, or thinking about buying, a 6128 Plus.

You see, Amstrad has stopped making the disk-drive Speccy because it feels it competes with the new model. The Spectrum may be technically far inferior, but it also costs half as much. OK, the 6128 Plus comes with a moni-



VISA



# What you see is what you pay - no hidden charges!

All prices *include* postage, VAT and labels

## Top Quality 3.5" DSDD each

1-49 **46p** 50-99 **44p**

100-149 **43p** 150+ **42p**

40 disks & 40 capacity box **£22.00**

80 disks & 80 capacity box **£41.00**

## Disk Boxes

3.5" (80 capacity) 1 **£7.40** 2 **£12.78**

Other sizes available - telephone for prices

All disks are purchased direct from a major manufacturer and are 100% guaranteed.



**MARKETACE LTD**



20 Stapledon Road, Orton Southgate,

Peterborough PE2 0TD

Tel: (0733) 371799 (24 hours)

Fax: (0733) 370722

Callers welcome Mon-Fri 9-5. Sat. 10-1.

# LOOK! AMAZING END OF SEASON SALE OFFERS

**3 1/2" DS/DD**  
**37p**  
Inc. Labels

**BULK BUYERS LOOK!**  
50 3 1/2 DS/DD .....£21.00  
100 3 1/2 DS/DD .....£38.50  
150 3 1/2 DS/DD .....£58.00  
200 3 1/2 DS/DD .....£74.00  
400 3 1/2 DS/DD .....£140.00  
500+ 3 1/2 DS/DD .....£Call  
Prices incl. VAT & P&P

**LOOK! DISK BOXES**  
40 cap £4.00  
80 cap £4.25

**NEW! POSSO STACKABLE BOXES**  
150 cap £15.00

3 1/2 DS/HD  
80p

SONY  
BRANDED  
74p

5 1/4 DS/DD 23p  
5 1/4 DS/HD 45p

SONY BULK  
3 1/2 DS/DD  
41p

★ ALL DISKS CARRY A LIFETIME GUARANTEE ★

VAT included ADD £3.00 P&P. ADD £9 next day delivery

AMIGAS		Mouse Mat.....£2.50	ATARIS
SCREEN GEMS.....£355		Cleaning Kit.....£2	DISCOVERY.....£259
BATPACK.....£355		Ram Pack.....£35	Turbo Pack.....£350
FLIGHT OF FANTASY.....£355		+ clock.....£40	EXTERNAL DRIVE + PSU.....£67
CLASS OF 90'S.....£493		Cumana drive.....£66	Zip Stick.....£11
FIRST STEPS.....£510		3.5" ext drive.....£57	

★ QUICKJOY JET FIGHTER JOYSTICK £12 ★



CALL OR SEND CHEQUES TO B.C.S LTD  
349 DITCHLING ROAD, BRIGHTON BN1 6JJ



Tel: 0273 506269 (mobile phone: 0831 279084) 7 days. 24 hours.

is at Unit 3, Buckingham Industrial Park, Buckingham MK18 1UHL. Tel: 0280 822803.

## KNIGHTMARE TIP

Having trouble on the first couple of screens? Vinay Poran of Leeds has the

answer: You should go to the dripping wall, take the water and give it to the old man. Then take the food and give it to him. He will give you a magic spade. Then move into the second room (Open Door) and use the spade.

**Rod Lawton**

# 64

## COMMODORE'S COUNTDOWN

Christmas is just around the corner, with commodore repackaging the C64 in two games-included guises. Both packages contain a C64C, cassette player, two joysticks and four games. The first package, called *Mindbenders*, bundles Domark games *Trivial Pursuit*, *Snare*, *Confuzion* and *Split Personalities*. The second package, with a more dexterous than cerebral theme, incorporates four from Ocean: *Secret Agent*, *Sly Spy*, *Nightbreed*, *Shadow Warriors* and *Midnight Resistance* - the whole package sells under the name *Nightmoves*. For better games, it has to be the one to look out for. Retail prices for *Nightmoves/Mindbenders* are the same: £159.99.

## ANTI-COKE CODE

Game of the Week is awarded to *Snowstrike* from US Gold which has a number of points in its favour. First off has to be the basic premise itself: The US government has failed to take the matter of the Colombian drug barons seriously enough to satisfy the military, who relieve their frustration with Capitol Hill by dashing out to the back yard with a fleet of aircraft carriers and half the USAF to stamp out the dandruff dealers themselves.

You play an F-14 pilot. You have a choice of co-pilots and you can go out on ten different missions (in any of four difficulty levels). The missions can be carrier or land-based and involve knocking out cocaine smuggling and production facilities (on land, air or sea). The emphasis is on playability rather than flight simulation, and it works.

## DID I MENTION TILT?

I should have done so a few weeks ago. It's a stonking game currently avoiding attention by lurking in the budget sector. Coming from Code Masters at a mere £2.99, it knocks spots off much of the full-priced competition recently released. Each level of *Tilt* is a single-screen maze, through which you have to guide a ball from a starting position to a hole from which it can be dropped onto the next level. The idea is to get the ball to the hole without letting it touch the walls of the maze. But

your task can only be accomplished by tilting the whole level or table so that the ball has a hill to roll down. Consequently, the only way of putting on the brakes once the ball is rolling, is to tilt the surface in the opposite direction (you must have seen a pocket-money puzzle working on the same principle).

That is by no means all. A number of gates block the passages on each level. Pressing the fire button at the right time opens all the gates on a level for a couple of seconds, but their positioning, and the fact that you cannot hold them open by any means, requires precise timing by the player. Just to make matters worse, the player only has a certain amount of energy to spend negotiating each level and it's this energy which is used to tilt the table. Spend too much time trying to steer the ball around a hairpin bend and you'll run out of time. To stop the most skillful from sweeping through all eight levels too quickly, a larger ball has to be steered through the last few levels, leaving less room to allow for errors. This bloated bubble has even more work cut out of it by the other unhelpful features *Tilt* brings into play towards the end of the game.

It's well programmed, immensely playable (and frustrating), has great sound effects and a good 'tween-level sequence. You'll be playing *Tilt* long after the last 15 quid's worth of game you picked up has been forgotten about.

## WRATH OF THE DEMON

I saw a preview version of this recently. It's a horizontally scrolling arcade adventure of enormous proportions and it boasts a complete overdose of parallax scrolling. It's being coded by ReadySoft, the Canadian outfit responsible for *Dragon's Lair*. The animation demo was nothing short of stunning. The scrolling background cavern walls have a fantastic cartoon quality about them, as do the monsters (though these were static in the demo). Joe's sprite was large and well detailed and seemed destined to impress. But we'll have to wait to find out fate has in store. The game is due from Empire but it's too early to say when.

**Sean Masterson**





### LANGUAGE BARRIER

If you want to word process in a number of different languages, forget the PC and buy a PCW with *LocoScript*, at least that's the accepted wisdom. No more it seems, thanks to *Multiwriter* from Data Liberation.

This multi-lingual word processor supports more than 30 languages, including Farsi, Esperanto, Maltese and Serbian (Serbian? Where's that for God's sake?). You can combine English and foreign text together in the same document - even if the foreign language writes from right to left.

It uses pull-down menus and features a 'multi-lingual mail merger', whatever that may mean.

The program costs £199.95 from Data Liberation on 0983 864674.

### GRAMMATICAL ERRORS

Also from Data Liberation comes *Grammatik IV*. This is a grammar and style checker, but why we are supposed to take it seriously with a name like that I don't know. *Grammatik* helps you learn about your writing style and alter it if need be. As well as pulling you up if you misuse a word, it will give you hints as to how better to say what you are trying to say. It probably would have helped me out with that last sentence.

I've been promised a review copy of *Grammatik*, so I'll let you know when I've tried it out. Meanwhile it costs £99.95.

### WINDOW CRAZY

The world has gone mad over Windows 3, and with good reason. It's pretty, quick, and uses memory efficiently - not to mention multi-tasking. Since a lot of newcomers have recently been thrown into the Windows world - which, when you start to hit the hardware, can be an unfriendly place - a user group has started up to help you out with your WIN.INI files.

The Windows User Group looks like a thoroughly professional organisation - judging admittedly from the smart full-colour brochure which dropped through the door. It claims to run a product directory, a magazine, an evaluation centre and to provide meetings and seminars. There is also a technical support service. Although it is an independent group, Microsoft is fully behind it.

Membership costs a basic £46, although the product directory is extra. Departmental membership is also offered for businesses. You can contact the group at Enterprise house, Carlton road, Worksop, Notts S81 7QF or phone 0909 501351.

### BARGAIN HUNTING

The Star LC-10 has long been one of the most popular cheap 9-pin dot-matrix printers. It has a reputation for quality and reliability and is often heavily discounted. Alas no more, for Star has produced a new model which will surely supercede the LC-10.

And a very good replacement it is too. The LC-200 (no messing for Star - add 190 to the serial number!) is a very nineties-looking beast without a single straight line on it. It will hack along at a respectable 225 characters per second (45 in NLQ mode) and has a useful 16K built-in buffer and, but perhaps best of all, it can be used as a colour printer merely by swapping over the ribbon. At a listed price of £259, which is bound to be slashed by dealers as it becomes established, it looks like a worthy successor. Star is on 0494 471111.



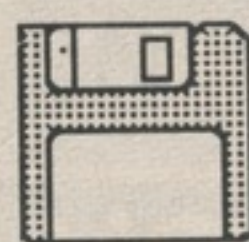
• The Star 9-pin printer, with both mono and colour ribbons thrown in.

### NOT THE DONE THING

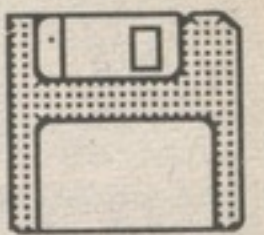
As a magazine we're not really supposed to comment on other titles, what with accusations of nepotism and all that. But, just this once, a new disk-based magazine for the PC deserves a mention and we are going to have to oblige, so here goes. *PC Interactive* comes on two 5.25-inch disks and needs a hard disk to run (neither fact is mentioned on the cover, which is shrink wrapped.) It contains a half dozen news items and features of general interest, but its main claim to fame is the advertisements which pop up every time you change screens - unfortunately there are only three of them so you get more than a little bored the eighth time the ad runs through its animation and there is no way to change over to the BBC.

The point we were going to make was that interactive magazines are a thoroughly good idea, although unfortunately this one doesn't really cut the mustard. Maybe the next one will.

Stuart Anderton  
and Steve Patient



## DISCS SPECIAL OFFER



**BULK VERBATIM 3.5" DSDD - 39p each**  
**BRANDED VERBATIM 5.25" DSDD - 36p each**

Above prices include VAT & labels, just add £1.50 for postage and packing.

★ ★ SHAREWARE £1.00 INC. P&P ★ ★

★ **EXTRA DISCOUNTS** ★  
(Including VAT + P&P)

VERBATIM BULK 3.5" DSDD	VERBATIM BRANDED 5.25" DSDD
50.....£20.70	50.....£17.00
100.....£39.67	100.....£33.00
250.....£93.15	250.....£81.00
500.....£184.00	500.....£160.00
750.....£270.25	750.....£239.00
1000.....£345.00	1000.....£316.00

**Software: (excludes VAT @15% p&p @ £3.50)**

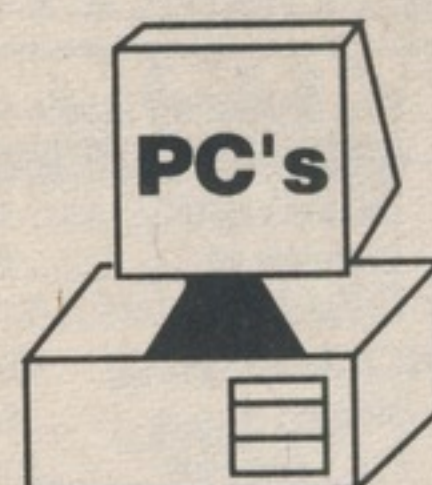
\* Lucid - 3D Spreadsheet, Reads/Writes Lotus files ONLY £46.00

\* Able One - Integrated WP, Spreadsheet, Comms, Database  
ONLY £60.00

\* Windows V.3 ONLY £65.00

\* Microsoft Flight Simulator ONLY £35.00

\* Quattro 123-2.2 clone - £70.00



**OWN BRAND:**  
**Excludes VAT**  
**Delivery £10.00**

All machines come with:

- ★ DELUXE CASE 5 FREE SLOTS
- ★ MS-DOS - V3.3
- ★ TILT MONO MONITOR

- ★ 12 Month warranty
- ★ 102 KEY KEYBOARD (EXCEPT XT)
- ★ 3.5" 720K FLOPPY DRIVE
- ★ 1MB RAM

LOW COST ENTRY PC-XT.....	£360.00
AT 286-12 AT 20MB .....	£650.00
386SX 16MHZ 45MB.....	£950.00
386 25MHZ 45MB .....	£1260.00
486 25MHZ 100MB.....	£2800.00

★★ NEW MINI VAC FOR COMPUTERS ★★  
★★ ONLY £7.00 +50P P&P + VAT ★★  
SEAL 'N' TYPE COVERS FROM £8.30  
SCREEN FILTER 12"/14" £12.50

Clarke Computer Systems, Akther & Mesh P.C.'s available.  
Software and other hardware also available - call for details

Please send cheque with order to:

**BUSIBYTE LIMITED**

156 Balgore Lane, Gidea Park, Romford, Essex.

Telephone 0708 724845





**ESP**  
SOFTWARE



## EDUCATIONAL SECTION



**Mother Goose** - Childrens adventure game that helps to develop reading skills. Free colour map of Mother Goose Land, save facility. Ages 4+ £22.95

**Designasaurus** - Fun With Dinosaurs! Print, Create, & Survive like the dinosaurs in their own ecosystem. Highly recommended. Ages 5+ £29.95

**NEW - FUN SCHOOL 3**  
**£19.95 (RRP £24.95)**

We Have Over 70 Top Class Educational Programs For The Amiga & Atari ST.

All Ages Covered From 3 To Adult.  
Contact Us Now For Your Free Catalogue



## PROFESSIONAL SECTION

The following is only a selection of professional & serious software available for the Amiga. Please call us for a price on anything you do not see here. All prices are inclusive. E. & O.E.

### BUSINESS

Advantage .....	£70.95
Arena Accounts .....	£116.95
Gold Disk Office .....	£119.95
Home Office Kit .....	£99.95
Maxiplan Plus .....	£121.95
Publisher's Choice .....	£69.95
Small Biz. Accounts .....	Call
Superbase Pro. 3 .....	£168.95
Superplan .....	£68.95
System 3 .....	£38.95

### C.A.D.

Draw 2000 .....	£146.95
Intro CAD .....	£44.95
Intro CAD plus .....	£84.95
Ultra Design .....	£219.95
X CAD Designer .....	£77.95
X CAD Professional .....	£334.95

### D.T.P.

Pagesetter 2 .....	£71.95
Pagestream Fonts .....	£27.95

Pagestream v2 .....	£149.95
Pro Draw v2 .....	£89.95
Pro Page v1.3 .....	£159.95
Pro Page Clip Art .....	£34.95
Pro Page Templates .....	£34.95

### GRAPHICS

3D Professional .....	£280.95
Animagic .....	£59.95
Animate 3D .....	£91.95
Can Do .....	£99.95
Deluxe Paint III .....	£58.95
Design 3D .....	£59.95
Imagine .....	£199.95
Modeller 3D .....	£59.95
Vista .....	£59.95
Pagerender 3D .....	£98.95
Pixmate .....	£38.95
Scene Generator .....	£33.95
Scuplt 3DXL .....	£89.95
Scuplt 4D Jr .....	£79.95
Scuplt Animate 4D .....	£319.95

### The Animation Studio £81.95

### VIDEO

Deluxe Video .....	£54.95
Digiview v4 .....	£99.95
Genlock 8802 .....	£179.95
Genlock 8806 .....	£699.95
Minigen .....	£96.95
Pro Video Plus .....	£179.95
TV Text Prof .....	£104.95
Video Effects .....	£117.95
Video Titrer V2 .....	£81.95

### WORD PROCESSORS

Becker Text .....	£64.95
Excellence! .....	£129.95
Pen Pal .....	£79.95
Pro Write v3.0 .....	£99.95
Works Platinum .....	£109.95
Transcript .....	£33.95
Word Perfect 4.1 .....	£159.95
Word Perfect 5.1 .....	£249.95
Word Perfect Lib. .....	£80.95

\* 4Mb \* 4Mb \* 4Mb \* 4Mb \* 4Mb \* 4Mb \* 4Mb \*

**BaseBoard 4.0** is the latest high tech memory expansion board available for the A500. Fits in the A501 slot. Increase the memory of your Amiga to 4.5Mb in steps of 512K. **NO SOLDERING.** Full 1 year Warranty. Clock Included.

### Incredible Prices

Unpopulated .....	£89.95
512K Populated .....	£115.95
1Mb Populated .....	£141.95
1.5Mb Populated .....	£167.95
2Mb Populated .....	£193.95
2.5Mb Populated .....	£219.95
3Mb Populated .....	£245.95
3.5Mb Populated .....	£271.95
4Mb Populated .....	£297.95

Educational & Serious Program Specialists

Further details on all products listed here are available upon request.

**(0702) 600557** ESP SOFTWARE  
24 Hour Service  
Access & Visa Accepted  
FAX (0702) 613747  
32B Southchurch Road  
Southend-on-Sea  
Essex SS1 2ND

# spectrum

### BEAT THEM UP

It's time to don your pyjamas, take to the mean streets of Manhattan and beat up a variety of evil baddies using your martial arts skills. Again. And it must be, ooh, at least a week since the last game was released which expected a similar course of action. You'd think they'd run a youth club and organise discos to keep all the bad sorts who inhabit the place out of trouble, wouldn't you?

Anyway, Code Masters in all its infinite wisdom wants you to dispense justice yet again to all the 'murderous scum' as the inlay puts it, in its latest cheapie, *Guardian Angel*. And despite the frightening levels of unoriginality it's actually very good indeed. That's not to say it's in the least bit revolutionary though. The action scrolls horizontally as the usual rum types come at you with various Black and Decker weapons and you see them off with kicks and punches.

The game was written by Dinamic Software, Spain's foremost Speccy game producer and originally sold at full price over there. There's definitely a professional gleam and sparkle that's often lacking in similar dodgy budget offerings. As usual with Dinamic games the difficulty level is very, er, difficult and the learning curve must be more like a diagonal line, but real beat-'em-up fans will respect that and enjoy the challenge. All in all, definitely one of the best budget beat-'em-ups around and well worth bagging up. Lets hope the Codies can wrangle some more good Spanish stuff for us soon.

### MORE CES

If you've recovered from the rigours of the CES there's another, slightly smaller, computer show you might want to attend. The second 8-bit Micro Show is due to take place on December 1 at Tamworth Arts Centre in, well Tamworth of course.

Both the Speccy and SAM will apparently be well catered for, with machines set up for you to play with as well as public domain, fanzines and software for you to buy. Best of all though, there won't be an ST, Amiga or anything else found to have more than 8 bits in sight. And I wouldn't mind betting that the refreshments will be a few tads cheaper than at Earls Court too. Entrance is a paltry 50p and further details are available when you send an SAE to the organiser, Adrian Betts at Turbo, 8 Healey, Lakeside, Tamworth, Staffs B77 2RF. Be there or be the geometrical construction of your choice.

### RISEN FROM THE GRAVE

DGW Griffith of London has just written me an interesting letter concerning SAM and the slightly strange situation the machine is now in. He says, "I admire the way owners of the now defunct MGT have turned disaster around to the extent of being able to now buy machines off the receiver! Also I think the new policy of selling the machine with a disk drive at a cheaper price is bound to be a winner in view of Amstrad ceasing manufacture of the Plus 3 (weird or what?). Such initiative should be encouraged by all - how many other software and hardware companies that have gone bust over the last decade have been able to make a comeback? Perhaps the SAM should be renamed the Phoenix!"

I definitely agree with DGW on congratulating Miles and Gordon's actions since the demise of MGT, they're still the ones keeping interest in SAM alive and the only good thing that could come from the death of the Plus 3 is an upturn in SAM's fortunes. On coverage of SAM in this column DGW gives an emphatic "yup". Let me know if you agree by writing to the usual address?

### GET SERIOUS

Although the only kind of software you see in the shops for the Speccy are games, there's a huge variety of stuff out there that doesn't come in big shiny boxes, has a crap plot and require copious joystick jiggling on your behalf.

One of the lesser-know minorities is the educational market, which is surprisingly well populated thanks to the Speccy's early success at getting into the classroom. I've just heard from a Spectrum educational software producer called Teacher's Pet Software (175 Craigton Rd, Aberdeen, AB1 7UA Scotland) and they look like they offer a high level of well designed educational programs for school and home use. They have a range of 50-odd packages, ranging from the rather good sounding *Planet Mathematics* to clip art to *Escape From School*, which is hopefully an educational adventure game. Prices are very reasonable at £4.50 each and I'm sure anyone who uses a Spectrum for educational purposes would benefit from finding out more about what's on offer.

### MIKTOR

Here's another poke in a seemingly infinite series from our bestest friend Miktor. Do you know, the old lag is even beginning to get fan mail. Any-



way, to get this hack for *Outlaw* working simply:

1) Type the thing out. 2) Save it for future use if you want.. 3) Type RUN and start your *Outlaw* tape from the beginning. 4) Marvel at the skill and generosity of the man they call Miktor.

10 REM OUTLAW (48 + 128) LIVES  
20 CLEAR 3E4: LOAD "" CODE  
30 POKE 65214,226:POKE 65215,  
33

40 FOR N=23440 TO 23446: READ A:  
POKE N,A: NEXT N  
50 RANDOMIZE USR 65024  
60 DATA175,50,251,149,195,0,1-28

Have you got any hints, pokes or cheats for any Speccy games? Send them along with anything else Spectrum-related, to Robin Alway at *New Computer Express*, 30 Monmouth Street, Bath BA1 2BW. Thanks!

Robin Alway



## MORE STE HEADACHES

Oh dear. I hate to start off the week's column on a sour note, I really do. But it appears there's a rogue batch of STEs that's been sold to customers that get all unhappy and depressed if you try and run a hard disk, and wipes your hard disk data after just a few hours. If you have suffered such a problem, which stems from a fault in the DMA chip, call Atari's customer service line on 081 309 7770.

Such things happen, it must be admitted, though it sometimes seems to happen more to Atari than to others. (When the STE was originally launched late last year, you'll no doubt remember, it proved incompatible with some older ST games.) It's unfortunate, but with the right approach and a determination to put things right there's no reason why it should be any more than an irritation.

Thus Atari's attitude towards the whole problem is all the more indefensible. Not only has it sought to play down the whole thing (when it should be saying, "We are doing our utmost to correct this unfortunate and isolated problem, and apologise unreservedly for any difficulties this may have caused any of our valued customers"), a spokesman is quoted as being 'more than satisfied'.

Worse than that, even after you've discovered how to get Atari to rectify its cock-up, there is, unbelievably, no guarantee from Atari that third party drives will work with the DMA interface!

This is simply not good enough from the company that would dearly love the ST to build on its image as a professional business machine, would you believe.

## DEMO ATTACK

If your non-computerate friends ever say to you, "Wossis estee you're always going on about?" You can either a) attempt to correct their speech impediment, or b) show them. The temptation is usually to blind them with a quick run through of *Populous* or

*Kick Off*, but unfortunately the complexity of the former and graphic simplicity of the latter usually results in a severe waning of interest.

That's one of the things demos are for. Load up one of the latest and you can blow your friend's socks off. And The Demo Club's latest disk catalogue, recently released, is packed with new and exciting examples of the demo-creator's art.

Such as? Glad you asked me that. Such as *Soundtracker*, a joint venture between Persistence of Vision, which wrote the program, and The Demo Club, which hacked the music from Commodore Amiga games machine demos.

The amazing thing about *Soundtracker* is that it enables STs to play Amiga music. "We have reached a turning point in the quality of music possible on the ST" (Steve Carey, *New Computer Express*, just now).

And as if *Soundtracker* weren't enough, here, very soon, comes *Noisetacker*, a conversion of the legendary Commodore Amiga games machine *Soundtracker* (confused yet?).

The Demo Club is currently porting hundreds of instrument samples over to the ST for this program, which is 100 per cent compatible with both Amiga Mods and voice samples. You can write a piece of music on the ST with samples originating from the Amiga, port it back to the Amiga via RS232 or DOS to DOS and play it in all its glory on the Amiga. Perhaps very soon we'll be finding Amiga demos containing ST music!

The above mentioned software, and the latest disk catalogue, is available from The Demo Club, 23 Alma Place, Spilsby, Lincs PE23 5LB, or call 0790 53741.

Incidentally, the latest 180 page issue of *ST Format*, available now, has a fully useable demo version of *Tracker*, the highly acclaimed (by me, for a start) music creator, as well as an absolutely complete and specially produced version of the Henry Cosh ➤

## ★ Sinclair QL ★

EEC LTD MAIN SUPPLIER OF Sinclair QL COMPUTERS & PRINTERS  
QLs FROM £125. PRINTERS FROM £120.

THE EXPANDABLE SYSTEM FOR SMALL BUSINESSES, BEGINNERS, AND EXPERTS.  
QLs COMPLETE. JM, FULLY TESTED AND WITH 6 MONTHS WARRANTY.

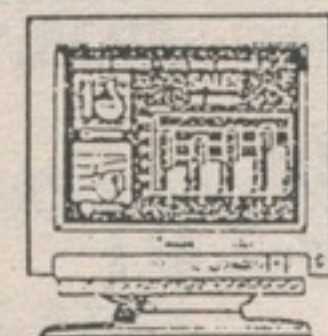
TV LEAD. QL SOFTWARE 2.35. QUILL- WORD PROCESSOR, ABACUS- SPREAD SHEET, ARCHIVE- RECORDS, EASEL- BUSINESS GRAPHICS. CUSTOMERS BUYING ONE OF THE QL COMPUTERS ARE GIVEN ONE YEAR'S FREE MEMBERSHIP TO QUANTA (Help, Newsletters, & 400+ Library Programs- most Free). QUANTA MEMBERS CAN OBTAIN A £5 DISCOUNT \* The JM QL can run all Programs available for the QL system. \* A JS ROM CAN BE FITTED & TESTED BY EEC LTD FOR AN EXTRA £25 at time of Order, but not retrospectively.

£125

### \* SPECIAL OFFERS \*

WHILE STOCKS LAST

NEW PHILIPS COLOUR MONITORS  
14in HIGH RESOLUTION  
ENHANCED GRAPHICS, 85 CHARS,  
RGB INPUT. COMPLETE WITH  
TILT & SWIVEL STAND, AND QL  
LEAD READY TO PLUG-IN AND GO.  
RRP £379.99



£220.  
INC VAT

UNIVERSAL DISK DRIVE.  
1mb, 3.5in CASED, COMPLETE  
WITH BUILT-IN POWER SUPPLY,  
MAINS SWITCH & 13amp PLUG.  
EXTERNAL DIP SWITCHES ADAPT  
DRIVE FOR- QL, PC, ATARI,  
AMIGA, ETC. COMES WITH FULL  
INSTRUCTION BOOK, PLASTIC  
COVER, AND FREE DS/DD DISK.  
£89 INC VAT QL LEAD £10.  
TWO DRIVES £160. LEAD £15.

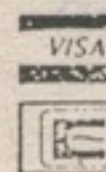
UNCASED DRIVES  
NEC FD1036A 1mb 3.5in 1/3  
HEIGHT. £49 INC VAT.  
EPSON 1/2mb 5.25in 1/2  
HEIGHT. £40 INC VAT.  
LEAD FOR DISK 1/FACE £12.

PC/QL KEYBOARDS/INTERFACES  
STANDARD QL KEYBOARD & BASE.....£6  
PC PERMANENT KEYBOARD COMPLETE WITH 5 PIN CONNECTOR.£25  
PC TO QL INTERFACE.....£75

C. ITOH DAISYWHEEL PRINTER SERIAL. PRINTS AT 20 CPS. CAN PRINT 1+3  
COPIES. PAPER WIDTH 13 INS. CHARS PER LINE: 115, 138, OR 172:  
SELECTABLE ON TOP PANEL. BUFFER 256 BYTES. OBTAINABLE EXTRAS:  
CENTRONICS MODULE, 2-COL RIBBON, TRACTOR, & AUTO SHEET FEEDER.

£140

INTERCHANGEABLE PLUG-IN INTERFACE MODULES FOR STAR NL-10 PRINTER.  
SERIAL, PARALLEL/CENTRONICS, IBM/PC, OR COMMODORE. each £20.



PRICES INCLUDE VAT. TERMS CWO, ACCESS or VISA.  
MINIMUM ORDER £10. CARRIAGE £8.00 FOR PRINTERS & QL  
(OVERSEAS £20.00). OTHER ITEMS £3.00 (OVERSEAS £6.00)

EEC LTD

10-21 MISBOURNE HOUSE, CHILTERN HILL, CHALFONT ST PETER, BUCKS,  
SL9 9UE. Tel: 0753 088066. FAX 0753 087149 (AD)

## CONSOLE \* QUEST

Tel: (0903) 63786 Office hours: 10am-1pm 2-9pm Monday to Friday

CAN YOU PREDICT THE FUTURE - WELL, WILL IT  
SNOW AT XMAS, WILL LIVERPOOL WIN THE  
LEAGUE, WILL ANYONE BEAT OUR PRICES?

We, at Console Quest, would like you to enter the brilliant,  
wonderful, NEW era of games consoles.  
(Mums & Dads will love them as it keeps the kids quiet. Kids love  
them as they can't hear their Mums and Dads - Mutual pleasure!).

We supply both new and second hand console machines and games.  
We have the latest to the oldest, from BATMAN to ALEX KIDD.  
The prices for the games range from £15 to £50.

Below are examples of new games that we have in stock:-

MEGADRIVE	PC ENGINE	GAMEBOY	IMPORTED NEO-GEO
MOONWALKER	OPERATION WOLF	BATMAN	MAGICIAN LORD
KLAX	HELL EXPLORER	TMNT'S	BASEBALL STARS
STRIDER	VALKYRIE	SPIDERMAN	GOLF
INSECTOR X	LEG. AXE 2	PAPERBOY	VIETNAM 1975
HELLFIRE	SPLATTERHOUSE	DR MARIO	NINJA COMBAT
SUPER MONACO	DEVIL CRASH	DOUBLE DRAGON	RIDING HERO

WE SELL LOTS MORE AT SPECIAL PRICES. PLEASE RING.

We supply joypads & joysticks, MEGADRIVES & PC ENGINES at £155.  
The ATARI LYNX at £150 too. BUT most of all, we provide help and a  
service, which we hope you will find is second to no-one else.

At Console Quest, we play the games too, you know.

PS. POWARCADE NOW AVAILABLE, PLEASE RING.



CONSOLE QUEST,  
I ASHACRE MEWS,  
OFFINGTON, WORTHING,  
W. SUSSEX BN13 2DE.

VISA



### AMSTRAD PCW

PCW 8256	£344.00	<b>£395.60</b>
PCW 8512	£431.00	<b>£495.65</b>
PCW 9512	£451.00	<b>£518.65</b>



### AMSTRAD PC1640 FREE LOCOSCRIPT PC

SD MD	£395.00	<b>£454.25</b>
SD CD	£491.00	<b>£564.65</b>
SD ECD	£581.00	<b>£668.15</b>
DD MD	£491.00	<b>£564.65</b>
DD CD	£581.00	<b>£668.15</b>
DD ECD	£671.00	<b>£771.65</b>
HD MD	£626.00	<b>£719.90</b>
HD CD	£715.00	<b>£822.25</b>
HD ECD	£805.00	<b>£925.75</b>

### AMSTRAD PC2086 FREE LOTUS 123 ver 2.01

SD MD	£448.00	<b>£515.20</b>
SD 12HR	£581.00	<b>£668.15</b>
SD 14HR	£626.00	<b>£719.90</b>
DD MD	£553.00	<b>£635.95</b>
DD 12HR	£697.00	<b>£801.55</b>
DD 14HR	£715.00	<b>£822.25</b>
HD MD	£671.00	<b>£771.65</b>
HD 12HR	£805.00	<b>£925.75</b>
HD 14HR	£850.00	<b>£977.50</b>

### AMSTRAD PC2286

DD MD	£800.00	<b>£920.00</b>
DD 12HR	£939.00	<b>£1079.85</b>
DD 14HR	£1002.00	<b>£1152.30</b>
HD MD	£902.00	<b>£1037.30</b>
HD 12HR	£1030.00	<b>£1184.50</b>
HD 14HR	£1075.00	<b>£1236.25</b>

### AMSTRAD PC2386

HD MD	£1707.00	<b>£1963.05</b>
HD 12HR	£1844.00	<b>£2120.60</b>
HD 14HR	£1892.00	<b>£2175.80</b>

### OLIVETTI PCS286

DD MONO	£926.00	<b>£1064.90</b>
DD COL	£1081.00	<b>£1243.15</b>
20mb MONO	£1022.00	<b>£1175.30</b>
20mb COL	£1163.00	<b>£1337.45</b>
40mb MONO	£1116.00	<b>£1283.40</b>
40mb COL	£1252.00	<b>£1439.80</b>

### I.B.M.

MODEL 30-002		
c/w8503 MONO	£722.00	<b>£830.30</b>
c/w8512 COL	£900.00	<b>£1035.00</b>
c/w8513 VGA	£1015.00	<b>£1167.25</b>

MODEL 30-021		
c/w8503 MONO	£962.00	<b>£1106.30</b>
c/w8512 COL	£1140.00	<b>£1311.00</b>
c/w8513 VGA	£1230.00	<b>£1414.50</b>

MODEL 30-286		
c/w8503 MONO	£1252.00	<b>£1439.80</b>
c/w8512 COL	£1415.00	<b>£1627.25</b>
c/w8513 VGA	£1525.00	<b>£1753.75</b>

All prices in **BOLD** include VAT & carriage.

All Amstrad & Olivetti PC's come with one year on site maintenance.

All prices correct at going to press and are subject to change without notice. All goods carry manufacturers warranty



TUDOR HOUSE  
HIGH STREET  
STONEHOUSE  
GLOS GL10 2NF  
TEL: 0453 791282

To order please telephone  
our order hotline as below  
quoting credit card no.  
AMEX, ACCESS, VISA  
ORDER HOTLINE TEL:  
0453 823156



• Just one of the amazingly drab and dreary and somewhat pedestrian sketches you can import into your documents using *Calligrapher*

Sequencer, reckoned by many (by me, for a start) to be one of the best pieces of PD software ever written for the ST. Buy yours now, £2.95, can't say fairer than that, etc.

#### CALLIGRAPHER ARRIVES

Electron, publishers of the document processor *Calligrapher*, has formed a UK subsidiary to distribute the program in the UK.

The software comes in two configurations, *Junior* and *Professional*. Both include an impressive range of features that at least make credible the publisher's claim that this is the 'most powerful document processor on the ST' with: proportional type; vector outline fonts up to 128 point; multiple columns; five font faces included; spell checker (180,000 in *Professional*); customise facilities; and the ability to accept IMG, GEM Degas and Neochrome graphic formats and GEM bitmap fonts.

*Calligrapher Junior* costs £79 and *Professional* £139. Further details from Electron's UK subsidiary WorkingTitle on 0865 883 592.

#### EUROPEAN CUP FINAL AT WEMBLEY

Speaking of *Kick Off* (yes I was: read above story), there is currently a national championship about to be played, with more than 5,000 said by the organisers to have signed up already.

Well, the final stages take place at the Computer Shopper Show on Sunday December 9 at Wembley (Arena, not Stadium. Get serious), with a cash prize of £1,000 at stake for the winner. And the champion gets to take on the Italian king of *Kick Off*, where the competition attracted an amazing 15,000 entrants.

Computer Shopper begins on Thursday December 6 at Wembley Arena. Entrance is a fiver, and £3.50 for under 16s.

#### WIGAN PEER GROUP

Nick Shotton of Wigan writes to complain about the difficulty of finding a local ST user group. "Is there one in

the north at all?" he asks. Indeed there is, Nick. Alan Owen runs one, and you can contact him on 0942 212662.

Incidentally, if you run or are a member of an ST user group I'd be delighted to hear from you so I can pass on details. Besides the obvious – contact name and address or, preferably, phone number – let me know when and where you meet, and any special details such as the nature of the group's interests and whether it produces a newsletter. Write to: Steve Carey, ST Express column, 30 Monmouth St, Bath BA1 2BW.

#### 32,768 COLOURS FOR ST!

Incidentally, speaking of user groups, the latest issue of Bournemouth and Poole Atari User Group's excellent 'alternative Atari newsletter' contains details of a hardware modification that increases the ST's colour palette from 512 (4,096 on the STE) up to a modest 32,768. Just looking at it scares the bejaysus out of me – it looks light a fight between a plate of spaghetti and a family of centipedes – but it's somehow heartening to know it can be done, if not by me.

You can contact the BaPAUG c/o 248 Wimbourne Rd, Oakdale, Poole, Dorset BH15 3EF.

#### WHISTLE STOP TOUR STARTS

Yet another reminder that the Atari tour, visiting Bristol, Manchester, Leeds, Newcastle, Glasgow and Birmingham, begins soon – October 23rd to be precise.

There is something for anyone interested in music, business, education, graphics, desktop publishing or games, and as well as Atari itself you'll be able to meet representatives from Microdeal and Mirrorsoft.

Prizes totalling £40,000 are being given away and there are seminars and demonstrations. Entrance is free, and the activities begin at 11am. In short, it could be quite good. Get along to the following locations, and please don't be put off by the fact that yours truly will be there to start the tour off at Bristol Temple Meads, platform 2, on



Tuesday October 23.

Then it's on to Manchester Victoria (platform 17, Wednesday 24); Leeds (1, Thursday 25); Newcastle (12, Fri-

day 26); Glasgow Central (3, Saturday 27); and finally Birmingham International (1, Monday 29).

Steve Carey

# Macintosh

## MAC IS HERE

For those new to Macs perhaps I'd better explain that, unlike many other computer manufacturers, Apple has always had a policy of total machine compatibility. Basically, what that boils down to is that a program which runs on one model of Macintosh should run on them all. While this isn't absolutely true (we don't live in a perfect world) the rule should hold good for about 95 per cent of programs. Sadly, the other five per cent are often some of the best games; because programmers use 'illegal' techniques to speed up things like screen drawing, sometimes games have to be re-written to work on new models. I'll be talking more about that problem in a future column, but rest assured that I'll be trying out any software that we review on as many different models of Mac as possible.

## THIS COLUMN

Over the coming weeks I'll be looking at how to get the best out of your Macintosh, sorting out the whizziest games and the best cheap 'serious' programs, and investigating what's happening in the Mac world. At least that's the plan so far, but if you want to see any specific subject covered or have any questions, just write in and ask. Remember that much of the Macintosh press has been going for some time, and will not necessarily have the sort of information that you want - much of the writing assumes that you are already fairly Mac-literate. That's where we come in: don't be shy if you're a Mac beginner - come on down! (Well, write on in at any rate.)

## FIRST THINGS FIRST

Having bought your Mac, you're going to want to get programs to run on it. Well, here's one to start with: *Disinfectant 2.1*. This is an anti-virus program, and should be owned by everyone who has a Mac. There is no need to panic about viruses on the Macintosh - but that doesn't mean that you should ignore them. While Macintosh viruses are much less dangerous than their PC counterparts (no Mac virus so far has actually damaged data), they spread extremely quickly and so it only makes sense to guard against them. *Disinfectant* is totally free, and is available from any Macintosh public domain software

source. There are commercial anti-virus offerings available, but *Disinfectant* should do the job for you with no problems.

## DOWN TO BUSINESS

Right, that's got that bit over with. Now on to the important bit: fun things to do with your Macintosh. Let's be honest here, the Mac may be the ultimate productivity tool and it may have the best user interface yet implemented on a personal computer; but the main benefit of using Apple's little baby is that it's fun!

While there certainly aren't as many whizzy, shoot-'em-ups available for the Mac as there are for, say, the Amiga, the Macintosh has an absolute plethora of great games available, for very little money. The reason for this is that the Mac has been around, in one form or another, since the early 1980s. And because it's such fun to use, programmers in their thousands have been writing games, utilities and business programs in their spare time.

Most of these programs originate in America, but the vast majority are available in England through public domain software houses. The Americans believe in the 'shareware' system of software distribution, where you only pay for a program if you like it. When you get shareware programs it is worth considering that a number of programmers actually make their living from the shareware system, so if you keep a program but don't pay for it, you are doing the programmer out of his livelihood. Most shareware fees are only a few dollars; if no-one pays up then the programmers will lose interest and go on to more lucrative work, so depriving us all of any future programs. So pay up!

End of commercial.

## THAT'S ALL, FOLKS

And that's it for the first column. If it's nothing like you wanted, write in and let me know (I probably won't do anything, but it's nice to get letters).

If there's a topic that you want to see covered, or if you have any questions (even fairly technical ones - Future Publishing has over 60 Macintoshes, so someone will know the answer!), just drop me a line.

Ian Wrigley

## MADE IN THE U.S.A

"FORMAT ON A HIGH QUALITY PRODUCT AT THE BEST PRICE"

**3 1/2" DS/DD 35p/inc VAT**

**100% CERTIFIED**

PRICES PER DISK	DS/DD	DS/HD
10 - each.....	55p	99p
50 - 200 .....	49p	86p
250 - 400 .....	39p	79p
450 - 1000 .....	35p	73p

UNBRANDED BULK, SONY, JVC OR 3M PACKED 10 OR 50 pcs EA

**5.25" FROM**

**DS/DD 25p each**

**DS/HD 55p each**

INTERNATIONAL BRANDS PKG 10+

COMPLETE LINE OF ACCESSORIES AVAILABLE AT DISCOUNT PRICES.

Add £2.80 for P&P - All prices include VAT/labels. To order send cheque/P.O. or call



**PHONE: 081 759 8829**

**FAX: 081 897 0407**

**VISA**

## US COMPUTER SUPPLIES

**Room 130/G, Building 521, Cargo Centre, London Heathrow TW6 3LL**

PRODUCTS/PRICES SUBJECT TO CHANGE WITHOUT NOTICE

## HIGH QUALITY DISKETTES

PIN NUMBERED QUALITY DISKETTES 100% CERTIFIED AND GUARANTEED 100% ERROR FREE. MANUFACTURED AND QUALITY ASSURED BY AN INTERNATIONAL BRAND NAME

**3 1/2" DS 720K 37p EA**

**3 1/2" DD 37p EA**

**3 1/2" COLOURED DISKS 40p EA**

**5 1/4" DS 360 K 21p EA**

**5 1/4" HD 1.2 MB 42p EA**

**DS/HD 1.44MB 89p EA**

PLASTIC LIBRARY CASES		EA	STORAGE BOXES	
3 1/2	LIBRARY	89P	3 1/2 40 cap ...£4.20	3 1/2 80 cap .. £4.60
5 1/4	CASES		5 1/4 50 cap ...£4.40	5 1/4 100 cap £4.90

**EURODATA**  
12A QUAKERS YARD  
ADAM AND EVE ST  
MARKET  
HARBOROUGH  
LEIC LE16 7LT  
TEL: 0858 433992  
FAX: 0858 432549  
GO ON  
BE  
TEMPTED

**LIFETIME GUARANTEE**  
**ALL PRICES INCLUDE DISKETTE LABELS ENVELOPES AND VAT**  
ORDER NOW WITH POSTAL ORDER OR CHEQUE MADE PAYABLE TO EURODATA, OR TELEPHONE YOUR ORDER USING MASTERCARD & VISA. SUBJECT TO AVAILABILITY  
ADD £3.20 P&P



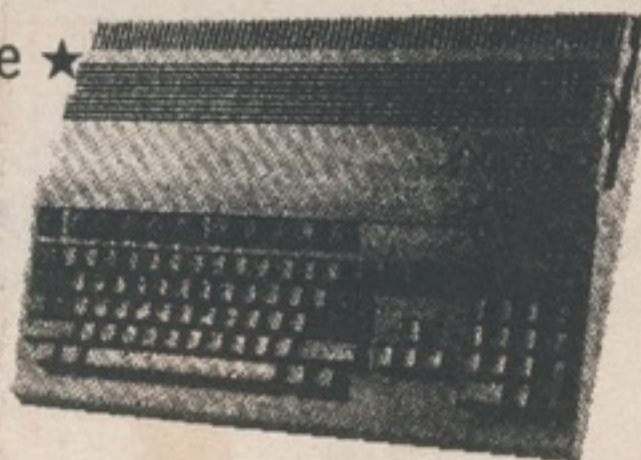
**LOWEST PRICES FOR HIGHEST QUALITY**



# AMIGA DEALS

## AMIGA 500 STANDARD PACK

- ★ A500 computer ★ 512k RAM ★ 1Mb disk drive ★
- ★ mouse ★ modulator ★
- ★ power supply ★ operation-manuals ★
- ★ workbench disks, etc. ★



ONLY **£339.95**

## 1/2 MEG UPGRADE BOARD

- ★ Uses latest 4 chip design
- ★ Memory on/off switch
- ★ Option of battery backed clock
- ★ Full 12 month guarantee
- ★ New super low price

**£29.95**  
Clock Version  
**£39.95**

## 3 1/2" HIGH QUALITY DISKS

- Box of 50 ..... **£19.95**
- Box of 100 ..... **£37.95**
- Roll of 1000 labels ..... **£5.99**
- ★ 100% certified ★ Individually wrapped
- ★ "Made in Japan" media ★ Fully guaranteed

## CUMANA CAX 354 DISK DRIVE

- ★ Latest slimline design
- ★ Quiet, high precision head positioning
- ★ High speed access
- ★ Acknowledged as "the best" (ST Version £69.95)

RRP **£89.95**  
**£64.95**



## VIDI-AMIGA SCOOP



### What you get..

- VIDI-AMIGA (PAL version)**  
Hardware interface plus software .....rrp £114.95
- VIDI-CHROME**  
Upgrade kit enabling you to digitise stunning full colour pictures in seconds .....rrp £19.95
- E180 VHS/BETA**  
High quality video tape to get you going .....rrp £6.95
- ALL THIS FOR THE INCREDIBLE PRICE OF **£99.95****

## —X— NEW —X— —X— NEW —X—

### MUSIC-X JUNIOR

"provides everything that the average amateur musician could possibly require" Amiga Format N.B. Fully compatible with Music X RRP £79.95 **OUR PRICE £49.95**

### MUSIC-X

Enhanced 1.1 Version

Widely acknowledged as the best music package available. Now with even more enhancements it cannot be beaten N.B. Be wary of older versions being sold cheaper  
RRP £149.95 **OUR PRICE £89.95**

### MIDI INTERFACE

Our own beautifully designed product, colour co-ordinated and designed to sit on your Amiga. Features: 1 x in, 1 x thru, 2 x out. Comes complete with midi lead (extras:£2.99)  
RRP £29.95 **OUR PRICE £19.95**

## THE NEW 200 SERIES FROM



"The best printers just got better!"

### LC200 FACT FILE

- ★ Multi-purpose 9-pin, 80 column dot matrix printer with colour
- ★ Black and colour ribbons included as standard
- ★ Electronic dip switches (see LC24-200)
- ★ 180 cps draft elite/45 cps Near Letter Quality
- ★ High speed draft facility 225 cps at 12 cpi
- ★ Swivel selectable push or pull tractor
- ★ Bottom feed
- ★ Advanced paper parking with sheet feeder installed
- ★ Eight resident NLQ fonts: Courier, Sanserif, Orator, Script and italic versions

RRP **£297.85**  
**OUR PRICE £199.95**

### LC24-200 FACT FILE

- ★ Versatile 24-pin 80 column dot matrix printer
- ★ 200 cps in draft elite/67 cps in Letter Quality mode
- ★ 10 Resident LQ fonts
- ★ A high speed draft facility of 222 cps at 10 cpi
- ★ Swivel selectable push or pull tractor
- ★ Bottom feed
- ★ Advanced paper parking with sheet feeder installed
- ★ The economy of first and last line printing
- ★ 7 K-byte buffer expandable to 39 K-bytes
- ★ 11.7" carriage (A4 in landscape format)
- ★ Multi-part mode for 1 + 4 copies

RRP **£366.85**  
**OUR PRICE £239.95**

### LC24-200 COLOUR FACT FILE

- ★ Multi-purpose colour version of the 24-pin LC24-200
- ★ Seven colour printing - black, purple, orange, green, pink, blue and yellow
- ★ 30 K-byte buffer expandable to 62 K-bytes
- ★ 10 resident Letter Quality fonts: Sanserif, Times Roman, Courier, Prestige, Script and Italic versions
- ★ Electronic dip switches operable from the push button front control panel (as the LC24-200 mon version)
- ★ Optional font cards including Russian
- ★ Standard black ribbons available for economy purposes

RRP **£424.35**  
**OUR PRICE £279.95**

## BATMAN PLUS PACK

- ★ Amiga as in standard pack
- ★ Batman the Movie
- ★ F18 Interceptor
- ★ New Zealand Story
- ★ Deluxe Paint 2
- ★ Megablast joystick
- ★ Dust cover
- ★ High quality mouse mat
- ★ Wicked ten game pack Inc. Invaders, Pacman, Bouncer.

ALL THIS FOR JUST **£369.95**

## FLIGHT OF FANTASY PLUS PACK

- ★ Amiga as in standard pack
- ★ F29 Retaliator
- ★ Rainbow Islands
- ★ Escape from Planet of Robot Monster
- ★ Deluxe Paint II
- ★ Megablast joystick
- ★ Dust cover
- ★ High quality mouse mat
- ★ Wicked ten game pack Inc. Invaders, Pacman, Bouncer.

ALL THIS FOR JUST **£369.95**

## SCREEN "GEMS" PLUS PACK

- ★ Amiga as in standard pack
- ★ Days of Thunder
- ★ Shadow of the Beast II
- ★ Back to the Future Part II
- ★ Knightbreed
- ★ Deluxe Paint II **NEW!**
- ★ Megablast joystick
- ★ Dust cover
- ★ High quality mouse mat
- ★ Wicked ten game pack Inc. Invaders, Pacman, Bouncer.

ALL THIS FOR JUST **£369.95**

## THE ALL NEW... ULTIMATE GAMES PACK

Choose any of the above three packs and add the following:

**EXCLUSIVE** Dowling Mega Ten Game Pack comprising: RVF Honda, Datastorm, Dungeon Quest, E-Storm, Grand Monster Slam, Kid Gloves, Powerplay, Shufflepuck Cafe, Microprose Soccer, Tower of Babel.

**PLUS** The Classic Tenstar Pack comprising: Ikari Warriors, Buggy Boy, Wizball, Terrorpods, Barbarian, Thundercats, Art of Chess, Amegas, Insanity Flight, Mercenary.

**TOTAL RRP OVER £450**

**ALL THIS FOR THE UNBEATABLE PRICE OF: **£399.95****

## COMMODORE 1084S OR PHILIPS 8833

- ★ Stereo colour monitor
- ★ Can be used as T.V. with tuner
- ★ Includes cables

**£249.95**

## A590 HARD DRIVE

- ★ Official Commodore hard drive
- ★ Sockets for 2Mb RAM
- ★ Complete with free software pack
- ★ Built-in P.S.U./cooling fan

**£359.95**

## PHILIPS T.V. TUNER

- ★ Converts your 1084S/8833 into a colour T.V.
- ★ Complete with aerial and plug
- ★ Free 1 years on-site maintenance

**£69.95**

## AMIGA/ST MOUSE

- ★ Replacement mouse by contriver
- ★ Free mousemat
- ★ Free mousehouse
- ★ Full 1 year guarantee

RRP **£34.95**  
**OUR PRICE £19.95**

**DOWLING**

**COMPUTERS**

UNITS 48-50 TYNE ROAD, SANDY, BEDS, SG19 1SA





Being Star registered dealers we only sell official UK machines which come with a full 1 year guarantee. Beware of inferior imported products.

## PRINTERS

	RRP	OUR PRICE
Star LC10 Mono 144/36 cps	£229.95	£149.95
Star LC10 II 25% faster version	£263.35	£169.95
Star LC10 colour, 7 colours	£297.85	£189.95
Star LC24-10 - 24 pin multifont	£343.85	£229.95
Star LC24-15 wide carriage version of LC24-10	£573.85	£389.95
★ Star FR10 300/76 cps, 31K buffer, 16 NLQ fonts	£527.85	£369.95
★ Star FR15 wide carriage version of FR10	£688.85	£459.95
★ Star XB24-10 professional 24 pin series, 27K buffer	£688.85	£459.95
★ Star XB24-15 wide carriage version of the above with 41K buffer	£907.35	£599.95
★ Star LS08 LASER PRINTER 1Mb Ram, 300 x 300 dpi	£2172.35	£1399.95
Star LC10 sheet feeder (auto)	£74.75	£59.95
Star LC10 mono ribbons	£5.95	£3.95
Star LC10 colour ribbons	£7.95	£5.95
Star LC24-10 ribbons	£7.95	£5.95
Star LC10 quality dust cover	£7.95	£5.95

★12 months on-site maintenance

## ATARI DEALS

### DISCOVERY PACK 520ST-FM 512K RAM

#### HARDWARE:

520ST-FM computer & mouse, internal 1Mb disk drive, modulator & PSU .....£299.99

#### SOFTWARE - ENTERTAINMENT

BOMB JACK - platform style game with excellent graphics .....£19.95  
CARRIER COMMAND - 3D graphic land, air and sea battle .....£24.95  
OUTRUN - fast action Ferrari driving game from the arcades .....£9.99  
SPACE HARRIER - ultra fast 3D shoot 'em up arcade classic.....£19.95

#### SOFTWARE - BASIC/GRAPHICS/UTILITIES

FIRST BASIC - easy to use BASIC programming language.....£49.99  
NEOCHROME - powerful paint package with utensils .....£29.99  
STOS GAME CREATOR - create sprite based action packed games.....£29.95  
ST TOUR TUTORIAL - simple but effective GEM tutorial .....£4.99

BOOK: DISCOVER THE ATARI ST - comprehensive introduction to ST.....£6.95

#### ACCESSORIES - EXCLUSIVE TO DOWLING

KONIX MEGABLAST JOYSTICK .....£6.99  
HIGH QUALITY MOUSEPAD .....£6.99  
DUST COVER.....£6.99

TOTAL RRP OVER £510      OUR PRICE £259.95

### TURBO PACK 520ST-E 512K RAM

#### HARDWARE:

520ST-E COMPUTER & MOUSE, INTERNAL 1Mb DISK DRIVE, MODULATOR & PSU.....£399.99

#### SOFTWARE - ENTERTAINMENT

ANARCHY - 4 level parallax scrolling shoot 'em up .....£19.99  
BLOOD MONEY - challenges the most battle hardened gamer .....£24.95  
DRAGONS BREATH - battle to win immortality, arcade strategy .....£29.95  
HUMAN KILLING MACHINE - a tough martial arts arcade game .....£14.95  
IMPOSSIBLE MISSION II - platform graphic adventure with quizzes .....£19.95  
INDIANA JONES - LAST CRUSADE - help Indy find the grail? .....£19.95  
OUTRUN - fast action Ferrari driving game from the arcades .....£9.99  
SUPER CYCLE - arcade action on the back of a bike .....£19.95

#### SOFTWARE - BASIC/GRAPHICS/UTILITIES/MUSIC

FIRST BASIC - easy to use BASIC programming language.....£49.99  
HYPER PAINT II - powerful paint package with extensive utilities .....£34.99  
MUSIC MAKER 2 - anyone can create joyful sounds with this.....£49.95  
STOS GAME CREATOR - create sprite based action packed games.....£29.95

#### ACCESSORIES - EXCLUSIVE TO DOWLING

KONIX MEGABLAST JOYSTICK .....£6.99  
HIGH QUALITY MOUSEPAD .....£6.99  
DUST COVER.....£6.99

TOTAL RRP OVER £740      OUR PRICE £339.95

### NEW ENHANCED ATARI 520STE DEALS NEW ENHANCED

The new STE computers from Atari are compatible with the STFM but with enhanced features including:  
★ stereo sound ★ new blitter chip ★ extra joystick ports ★

520STE 1Mb RAM	£339.95
520STE 2Mb RAM	£399.95
520STE 4Mb RAM	£469.95

FREE £110 HYPERPACK with every 520STE comprising:	
Hyperpaint	rrp £35.99
Hyperdraw	rrp £21.99
Borodino	rrp £29.99
Metacomco Basic	rrp £24.99
Total rrp	£112.96

TELESALES ORDER LINE 0767 681760 (8 lines)



## HOW TO ORDER



### BY PHONE



Simply call our head office quoting your Access/Visa number on

(0767) 681760

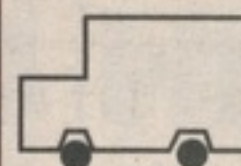
(8 lines)



### BY POST

Make cheques, building society drafts or postal orders payable to:

**Dowling Computers**



### DELIVERY (UK Mainland, most areas)

Please add £6 courier delivery for orders over £100, add £2 p&p for orders under.



## GOLD CLUB SERVICE

- ★ 7 day money back guarantee if not completely satisfied
- ★ 30 day exchange for new policy should a fault occur
- ★ 1 year guarantee giving FREE collection and delivery service should a fault occur
- ★ Exclusive gold card with personal membership number entitling you to special offers
- ★ All this for a nominal £10 per item over £100

## PRICE PLEDGE

We know the majority of you prefer to buy from us but are sometimes tempted by smaller companies offering a £1 or so price difference. That is why we have now introduced our

"PRICE PLEDGE"

"WE WILL MATCH ANY PRICE OFFERED ELSEWHERE ON A SAME PRODUCT BASIS"★

★ Subject to stock

## WHY CHOOSE DOWLING?

- ★ **ESTABLISHED OVER 4 YEARS**  
With a growing reputation for "putting the customer first". We intend to satisfy many more customers for years to come
- ★ **TECHNICAL SUPPORT/ON-SITE ENGINEERS**  
Employing over 20 specialist staff, we are equipped to deal with the majority of queries
- ★ **FULL TESTING PROCEDURE**  
All computer hardware is tested prior to despatch, proving Dowling's commitment to customer care

*So choose Dowling and put our reputation to the test!*



## PRINTERS

All of our printers come with a free cable and have a full 1 year warranty.

Star LC10 Mono (9-pin)	£150.00
Star LC10 Colour (9-pin)	£195.00
Star LC200 (9-pin) *NEW*	£230.00
Star LC24200 (24-pin) *NEW*	£275.00
Panasonic KXP1124 (24-pin)	£249.00
Panasonic KXP1624	
15" carriage (24-pin)	£399.00
Citizen Swift 24 (24-pin)	£299.00
Swift 24 Colour Kit	£34.95

## PRINTER RIBBONS

All of printer ribbons are genuine manufacturer ribbons - we do not sell inferior copies!

1 x LC10 Black Ribbon	£3.50
5 x LC10 Black Ribbons	£16.95
10 x LC10 Black Ribbons	£32.95
1 x LC10 Colour Ribbon	£5.20
5 x LC10 Colour Ribbons	£24.95
10 x LC10 Colour Ribbons	£47.95

Swift 24 Black Ribbons (each)	£3.95
Swift 24 Colour Ribbons (each)	£13.95

1 x Panasonic KXP1124 Ribbon	£8.95
5 x Panasonic KXP1124 Ribbons	£39.99
10 x Panasonic KXP1124 Ribbons	£69.99

## ATARI LYNX

Lynx Games Machine (with free California Games)	£149.00
---	---------

Game Cards :	
Blue Lightning	£19.99
Chips Challenge	£19.99
Electrocop	£19.99
Gates of Zendocon	£19.99
Gauntlet III	£23.50

RING NOW FOR NEW GAMES!

## IBM PC COMPUTERS

AMSTRAD PC + LAPTOPS, COMMODORE PC, ATARI PC, GOLDSTAR PC etc etc

PHONE NOW - WE HAVE AMAZING PRICES!

**REMEMBER**  
**ALL OF OUR PRICES**  
**INCLUDE DELIVERY**  
**AND VAT - WE**  
**DON'T HAVE**  
**HIDDEN PRICES**  
**LIKE CERTAIN**  
**OTHER MAIL ORDER**  
**COMPANIES ...**

## MICE

Contriver - ST compatible	£18.95
Contriver - Amiga compatible	£19.95
Contriver - PC compatible	£23.50
Contriver Trackball ST	£29.95
Naksha - ST/Amiga/Amstrad PC	£34.99
1352 - Amiga/Commodore PC	£34.49

## ATARI PORTFOLIO

Portfolio Pocket PC	£179.95
Parallel Interface + cable	£39.95
32K Memory card	£46.75
64K Memory card	£82.95
128K Memory card	£119.00
Finance Card software	£47.50
PC Application software	£47.50
Utilities Card software	£47.50
Serial RS-232 Interface	£56.95
Super Memory Expander	£164.95
Portfolio Card Drive	£67.50
Mains Power Adaptor	£11.99

## PHILIPS 8833 COLOUR MONITOR

All of our Philips 8833 colour monitors come with 12 months on-site warranty and are supplied with a cable of your choice:

8833 + STFM cable	£249.00
8833 + STE cable	£249.00
8833 + Amiga cable	£249.00

## ATARI ST ACCESSORIES

SM124 Mono Monitor	£99.99
Megafile 30 Hard Disk	£449.95
Megafile 60 Hard Disk	£619.95
SLM804 Laser Printer	£1115.00
SLM804 Toner Cartridge	£37.50
SLM804 Replacement Drum	£159.99
Cumana 1 MB External Drive	£89.95
Roctec 1 MB External Drive	£75.00
Forget-Me-Clock II Card	£24.95
ST Monitor Switch Box	£14.95
STE Stereo scart lead	£12.99
STFM standard scart lead	£7.95
Replacement STFM/E PSU	£99.95
Vidi ST Video Digitiser	£86.99
Atari CX40 Joystick	£4.95
Joystick/Mouse extension lead	£4.75
Replacement Mouse lead	£3.75
Standard Parallel lead	£5.95
14 Pin Din Plug (ST disk drive)	£2.25
14 Pin Din Socket (ST disk drive)	£2.95
13 Pin Din Plug (ST monitor)	£1.95

## AMIGA A500 ACCESSORIES

512K Ram Upgrade with clock	£39.95
A590 20Mb Hard Disk drive	£369.95
Cumana external disk drive	£75.00
Roctec external disk drive	£73.00
Vidi Amiga video digitiser	£99.99
Amiga Stereo Scart Lead	£9.99
Mouse Mat	£3.50

## AMIGA / ST SOFTWARE

Power Pack software (ST)	£34.99
Hyper Pack software (ST)	£14.95
Discovery Pack software (ST)	£19.95
Timeworks DTP (ST)	£69.99
First Word Plus (ST)	£56.99
Turbo Pack Software (ST)	£34.99
Photon Paint version 1 (Amiga)	£9.95
Photon Paint version 2 (Amiga)	£39.95
Deluxe Paint version 3 (Amiga)	£59.95
AMIGA PACK 1: F29/R.Bow Island/Robot Monst/DPaint 2	£19.95

# BLANK DISKS

All of our blank disks are guaranteed and supplied with labels. Our 3.5" Unbranded disks are either KAO or Sony. All Sony Branded disks are boxed and supplied with labels (all Sony 5.25" disks are supplied with write protect tabs). All disk prices include vat and delivery.



QUANTITY	10	20	30	50	100	200	250	300
UNBRANDED 3.5" DS/DD	5.99	10.99	15.99	25.99	49.00	84.99	99.00	119.99
SONY BRANDED 3.5" 2DD	9.50	18.50	26.50	42.00	80.00	175.00	210.00	245.00
UNBRANDED 3.5" HD	14.95	27.95	39.95	59.99	115.00	225.00	279.95	330.00
SONY BRANDED 3.5" HDD	27.50	53.00	77.00	120.00	235.00	460.00	570.00	680.00
UNBRANDED 5.25" 360K	3.25	6.25	9.25	14.95	27.50	52.50	61.00	77.50
SONY BRANDED 5.25" 2D	7.95	15.50	22.50	36.99	69.99	135.00	165.00	189.99
SONY BRANDED 5.25" HDD	12.99	24.99	34.99	56.99	99.99	195.00	235.00	275.00

# ST MIDI

C-Lab Creator SL V3.0  
C-Lab Notator SL V3.0  
C-Lab Alpha Notator  
C-Lab Unitor  
C-Lab Export

Steinberg Cubase V1  
Steinberg Cubase V1.5  
Steinberg Voice Editors

Dr T Tiger Cub  
other packages available.

CALL NOW FOR PRICES!

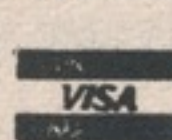
RING TODAY -  
LATEST  
VERSIONS IN  
STOCK AT  
AMAZING  
PRICES!

BEST PRICES (Dept NCE), Unit A,  
Grafton Place, Worthing, West



Sussex. BN11 1QX

Tel : (0903) 700714



SEE OPPOSITE PAGE FOR MORE DETAILS

TELESALES - 10 am till 12 midnight

ANSWERPHONE - 12 midnight till 10 am



# ATARI STE

Best Prices are now offering 3 different STE packs:

## THE STANDARD STE PACK

consists of 6 software titles (First Basic, Music Maker, Organiser, Hyper Paint, Hyper Draw and Borodino)

520STE 512K RAM	£329.00
520STE 1MB RAM	£359.00
520STE 2MB RAM	£439.00
520STE 4MB RAM	£549.00

## THE ATARI STE POWER PACK

Consists of 20 software titles (as the 520STFM Power Pack opposite) and a joystick

520STE 512K POWER	£359.00
520STE 1MB POWER	£379.00
520STE 2MB POWER	£469.00
520STE 4MB POWER	£569.00

## THE ATARI STE TURBO PACK

Consists of STOS Games Creator, First Basic, Hyper Paint 2 and Music Maker 2 and 8 games (Indiana Jones & the Last Crusade, Impossible Mission 2, Human Killing Machine, Super Cycle, Outrun, Dragons Breath, Anarchy and Blood Money) and a joystick.

520STE 512K TURBO	£375.00
520STE 1MB TURBO	£399.00
520STE 2MB TURBO	£479.00
520STE 4MB TURBO	£579.00

All STE computers are checked prior to despatch and all prices include VAT and delivery by courier. PLEASE RING FOR CURRENT PRICES AS THEY DO SOMETIMES CHANGE !!!

# STE RAM KITS

## DIY 1 KIT - 520STE to 1MB

( 2 x 256K cards ) SIMMS or SIPPS £39.99

## DIY 2 KIT - 520/1040 to 2MB

( 2 x 1MB cards ) SIMMS or SIPPS £119.00

## DIY 4 KIT - 520/1040 to 4MB

( 4 x 1MB cards ) SIMMS or SIPPS £235.00

All RAM prices include VAT and delivery and come with instructions.

# ATARI STFM POWER PACK

★ Atari 520STFM computer

★ 20 top selling games (Afterburner, R-Type, Gauntlet 2, Super Hang On, Space Harrier, Star Glider, Overlander, Super Huey, Pac Mania, Nebulus, Eliminator, Predator, Xenon, Bombuzal, Bomb Jack, Double Dragon, Black Lamp, Out Run, Star Goose and Star Ray)

★ Mouse, Joystick and instructions

ALL THIS FOR ONLY

# £299.00

including vat and delivery

# SM124 HI-RES MONOCHROME MONITOR

THE ATARI SM124 HIGH RESOLUTION MONOCHROME MONITOR is recommended for all serious applications on the Atari STFM / STE. For example : Word Processing, MIDI, DTP, CAD etc etc. Resolution : 640 x 400

STILL ONLY  
£99.99  
INCLUSIVE OF VAT + DELIVERY

REMEMBER : ALL PRICES INCLUDE DELIVERY + VAT

# AMIGA A500

all of the packs listed opposite come with :

- ★ Amiga A500 computer + mouse etc
- ★ DELUXE PAINT 2 graphics software

ALL THIS FOR ONLY

# £ 365.00

inc vat and courier delivery

## A500 BASE PACK

- ★ Commodore Amiga A500 computer
- ★ Modulator, Mouse + instructions

ALL THIS FOR ONLY

# £ 339.00

## BATMAN PACK

Batman, New Zealand Story and F18 Interceptor

## or FLIGHT OF FANTASY

Robot Monsters, Rainbow Island and F29

## or SCREEN GEMS PACK

Days of Thunder, Back to the Future II, Nightbreed and Shadow of the Beast II

## CLASS OF THE 90's PACK

CALL FOR DETAILS - OUR PRICE :

# £ 529.00

inc vat and courier delivery

## ST GAMES ONLY £1.75 EACH ?

Afterburner, R-Type, Gauntlet 2, Super Hang-On, Space Harrier, Star Glider, Overlander, Super Huey, Pac Mania, Nebulus, Eliminator, Predator, Xenon, Bombuzal, Bomb Jack, Double Dragon, Black Lamp, Out Run, Star Goose and Star Ray.

All of the above games are available in the Power Pack Software pack for only -

# £34.99

- that's less than £1.75 each !  
(requires double-sided internal disk drive)

# BEST PRICES

(DEPT NCE), UNIT A, GRAFTON PLACE,  
WORTHING, WEST SUSSEX. BN11 1QX



# (0903) 700714

TELESALES - 10am till 12 midnight  
ANSWERPHONE - 12 midnight till 10 am



All prices include VAT and UK delivery unless otherwise stated. All prices / specifications / special offers are subject to change without notice. Goods usually despatched same day as cleared payment is received. Please make cheques/P.O.'s out to BEST PRICES. Mail order only, callers and collections only by prior arrangement with us. Thank You.

ADD £5.00 INC VAT FOR NEXT WORKING DAY DELIVERY, ADD £25.00 INC VAT FOR SATURDAY DELIVERY  
ADD £12.50 FOR AM WEEKDAY DELIVERY, ADD £20.00 FOR 72HR COURIER DELIVERY / TO IRELAND



# WHOLE WIRED WORLD

A regular trip around the world with Steve Gold

## AMI EXPO REPORT FROM CALIFORNIA

The big news this week for Amiga fans is the bevy of new products unveiled last weekend (October 6/7) at Ami Expo, the major Amiga show held in Anaheim, California.

Although Commodore turned out for the show, the bulk of interest was in what goodies third-party vendors had on display. *Amiga World*, the US Amiga-only magazine, announced its will launch a second magazine – *Amiga World Tech Journal* – next March.

Why the second mag? According to the publishers, more and more technical products are starting to appear for the Amiga and, with the release of Unix for the high-end Amigas, the publishers felt it was time to split *Amiga World's* coverage into one magazine for games and business users, and one for the serious technical user-base.

The new magazine will include articles on intermediate programming, as well as technical features on different languages. Video and midi enthusiasts are catered for as well. *Amiga World* can be obtained in some of the larger newsagents in the UK with a price of around the £1.80 mark, imported by the Comag distribution chain. So it seems likely UK Amigans will be able to lay their hands on copies of the new mag from next february onwards.

WordPerfect Corporation attracted a lot of interest at the show. As many Amigans will know, the US company suspended its development of future versions of *WordPerfect* for the ST and the Amiga around a year ago, leaving the ST/Amiga userbase to use *WP 4.0*, while PC users rocketed ahead to *WP 5.0* and beyond.

Rumours have been surfacing about the Utah-based company resuming development for the Atari ST, with *WP 5.0* rumoured for launch early next year. Officially, WordPerfect US denies such reports. At Ami Expo, however,

WordPerfect officials announced there will be an upgrade to *WP* to allow it to run properly under the latest editions of *Kickstart* and *Workbench*. A future version – not *WP 5.0* – is also in the pipeline, which supports fonts, graphics and the other powerful features seen in *WP 5.0* for the PC/Intel/Unix versions. So watch this space.

## AMIGA SHOW DATES 1990

As Ami Expo closed on Sunday, Ami Shows, the organisers, announced 1991 dates for future events. They are:

- **March 15/17** New York Hilton  
New York
- **July 26/28** FL Stouffer,  
Seaworld  
Orlando
- **Oct 4/6** Convention Centre  
Oakland
- **TBA late '91** Berlin

Ami Shows has a European office in Vaterstetten, West Germany, which can be contacted on 01-049-8106-31093 (voice) or 01-049-8106-34094 (fax)

## SUPRA RELEASES LOW-COST A590 CLONE

Supra Corporation has released its own answer to the RAM/hard disk upgrade for the A500 Amiga from Commodore. The Supradrive 500XP combines a 20Mb hard disk with a series of RAM expansion slots with prices from \$679 (for a 512K RAM expansion version)

The drive consumes less than four watts of power and, because of this, does not require external power of any fans, claimed Supra. The RAM is installed – either by Supra or by the user in 512K, 1, 2, 4 or 8Mb configurations.

The unit plugs into the A500's expansion port and comes with utility software for hard disk back-ups, formatting and file management to mention but a few.

Contact: Supra Corporation, 1133

Commercial Way, Albany, Oregon 97321, United States. Tel: 0101 503 967-9075

## ANTIC CHANGES START ON-LINE

Antic Online, the Atari ST area on the Compuserve online system, has relaunched itself as the Start Online area. The name change reflects the change in emphasis from 8-bit to 16/32-bit computers in the Atari world.

At the same time, Compuserve has opened a new high-speed port in London that supports modems to 2400 bps with V.42 (that's MNP Class 4 and Lap protocols) as well as MNP Class 5 error-correction and data compression. The surcharge for accessing the London port is the same as Istel – \$9-50. Further details from Compuserve's Bristol, UK offices on 0800 289458

## SHAREWARE LAUNCHED IN CANADA

Sharewares is the unusual-sounding name of a new company in Vancouver that is acting as an Atari shareware software outlet that is dedicated to handling software for the ST.

Operated by Terry Schreiber, a Canadian reporter for Ron Kovacs' *Z-Net* online newsletter for the ST, the start-up company takes credit cards and, according to Schreiber, is willing to act as a one-stop clearing house for a range of ST software.

Plans call for the company to take advertising in club newsletters and magazines. This will, says Schreiber, help shareware authors on a small budget to get some exposure. Further details from Schreiber – Canadian business hours only please (GMT – six hours) – on 0101-604-278-2099.

## TRACY REVEALED DOWN UNDER

As promised last week, further details of the Tracy 'alternative' portable ST have landed in my electronic in-tray. The Tracy system is produced by Austech Computers of Blackburn in Australia and is actually a modified 520 STFM in the machine's casing, but with a wealth of extras plugged inside.

Although the machine has no built-in display, it's been designed to be plugged into a wide variety of screens, including the usual array of monitors and TVs. The first prototype of the unit

has just been produced, and Austech Computers will shortly begin commercial production. Tracy contains the following within its casing:

- [1] Built-in 40Mb voice coil hard drive.
- [2] 720K Floppy Drive (soon to become 1.44 Mb).
- [3] 286 PC Emulator.
- [4] Spectre 128 Mac emulator (possible Spectre GCR in near Future).
- [5] TOS 1.4.
- [6] 2Mb of RAM – expandable to 4Mb internally.

According to Austech, all the above goodies have been fitted internally into the 520STFM's casing. The only differences that can be spotted is a hard drive activity LED, located above the function keys and near to the floppy drive. The case has been modified for a new drive and a switch on the back to disable the Spectre 128 unit, so the cartridge port will work as normal if required.

Contact: Lucas Lozo, Austech Computers, 157 Whitehorse Road, Blackburn 3130 Victoria, Australia. Tel: 010 61 3 894 1652 (voice) Fax: 010 61 3 894 1161 BBS: 010 61 3894 2155 (CCITT tones to 2400bps)

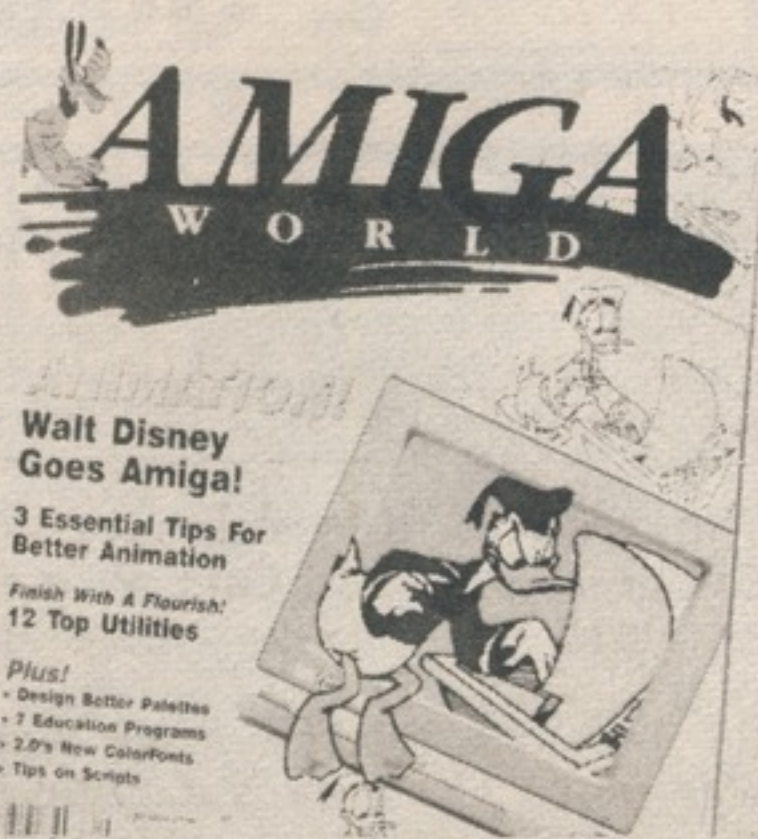
## MIGRAPH AMNESTY FOR SOFTWARE PIRATES

Following in the footsteps of other software houses (Wordstar and Xtree spring immediately to mind) Migraph has announced a pirate amnesty for its *Touch Up* image editing software for the Atari ST.

In return for sending in a pirated copy of *Touch Up* (the company has promised not to dust the disk for fingerprints) plus a cheque or money order for \$79.95 – or a credit card number – the company will send out a nice, fresh Atari ST disk still warm from its duplication department, with the absolute latest version of *Touch Up* for the Atari ST – complete with a brand new user manual.

The \$79.95 price tag includes free upgrades and a wealth of technical support (the company says). The offer expires on December 1 this year.

Contact: Migraph, 200 South 333rd Street, Suite 220, Federal Way, WA 98003, United States. Telephone: 206 838 4677.■



• *Amiga World* will next year need a second magazine – *Amiga World Tech Journal* – to cover as much as *Amiga Format*.



# LAUNCH into the nineties, a new decade of BARGAINS!!

ALL PRICES INCLUDE V.A.T.

**OFFER 1:**

Double Sided 3 1/2" Disks, Individually Wrapped, 880k 135 tpi, ideal for Amiga, ST, etc., Blue, Pin No., made in Japan, 100% Error Free. 2 for 1 Warranty or money back.

10 x 3.5"	£4.90
25 x 3.5"	£11.95
50 x 3.5"	£20.50
100 x 3.5"	£38.00
250 x 3.5"	£90.00
500 x 3.5"	£169.00
1,000 x 3.5"	£310.00
Inc. labels	

**Amiga 512K  
upgrade only  
£34.95 inc VAT**

**OFFER 4: High Density Disks.**

when only the Very Best will do.  
5.25" HD 1.6mb  
for IBM, AT, Etc.

3.5" D/SHD 2mb,  
made in Japan,  
HD in corner of Disk.

10 x 5.25" HD	£4.60	10 x 3.5" HD	£11.00
25 x 5.25" HD	£11.00	25 x 3.5" HD	£27.25
50 x 5.25" HD	£21.50	50 x 3.5" HD	£45.00
100 x 5.25" HD	£42.00	100 x 3.5" HD	£89.50
250 x 5.25" HD	£100.00	250 x 3.5" HD	£169.50
500 x 5.25" HD	£197.00	500 x 3.5" HD	£356.00

Including Labels, Envelopes & w.p.'s  
100% Error Free. 2 for 1 Warranty

Call for printer ribbons prices

**OFFER 2:**

Genuine Sony 3.5" Disks Double Sided,  
made in Japan, sold in Sony outers,  
probably the best disk in the World!

10 x 3.5"	£5.90
25 x 3.5"	£14.35
50 x 3.5"	£26.48
100 x 3.5"	£49.78
250 x 3.5"	£123.95
500 x 3.5"	£199.50
1,000 x 3.5"	£369.00

Including labels

**3 1/2"  
DISKS FROM  
31P Inc VAT**

**OFFER 5: 'Keep your data safe'**

Top Quality Anti Static Lockable Disk Boxes,  
complete with 2 keys, Small or Large  
Capacity, ideal for Home or Office use!

3.5" x 40 Capacity	£3.95
3.5" x 80 Capacity	£4.50
3.5" x 100 Capacity	£5.50
3.5" x 120 Capacity	£6.50
5.25" x 70 Capacity	£3.95
5.25" x 100 Capacity	£4.95

**OFFER 3:**

5.25" Double Sided 48/96 tpi for IBM PC and  
Clones, etc. 100% Error Free. 2 for 1 warranty or  
money back.

25 x 5.25"	£6.95
50 x 5.25"	£14.95
100 x 5.25"	£24.95
250 x 5.25"	£59.95
500 x 5.25"	£129.00
1,000 x 5.25"	£200.00

Complete with labels, envelopes & w.p.'s

**Star LC10 Printer  
£158.95 inc. VAT  
Star LC10 Col. Printer  
£199.95 inc. VAT**

**OFFER 6: Accessories;**

Sourced from the world's leading  
manufacturers, Quality and Price  
Guaranteed, Buy with Confidence

Amiga/ST dust covers	£1.95
Universal Screen Filter	£14.95
3.5" or 5.25" Cleaning Kit	£1.95
Mousemat	£1.95
200 Labels	£2.99
Roll of 1,000 Labels	£7.50
PC or Amiga Cable	£5.95
Mouse House/Bracket	£2.40
Printer Stand with Tray	£13.99
Printer Stand	£11.95
Mouse/Joystick Extension	£3.95

Four good reasons for choosing Original Media as your Supplier,

**1 No Minimum Order.**

**2 Access and Visa accepted**



**3 Next Day Delivery** (If order placed before 12.00 a.m.)

**4 Free Helpful Advice**

Post add £3.50 per order.  
Next Day Courier £7.95

CORPORATE,  
EDUCATION &  
TRADE ENQUIRIES  
WELCOME.

THE ORIGINAL

**MEDIA**

COMPANY LTD.

TEL: (0530) 813591 (8 LINES)

Fax: 0530 813595

Dept NCE  
14 ASHBY RD  
COALVILLE  
LEICESTER  
LE6 2LA

OUR

## PC KITS

**COST LESS THAN OUR BITS**

(which are pretty competitive anyway!)

	8 MHz XT one 360k floppy	12 MHz AT 20Mb HD	16MHz 386SX 42Mb HD
<b>Our Parts Prices</b>			
Case	42 Universal	43 Universal	55 de luxe
PSU	33 150w	33 150w	53 200w
Keyboard	33 101 key	37 102 key	37 102 key
Mainboard	55 8 slots	115 7 slots, up to 4Mb	259 8 slots, up to 8Mb
RAM	35 512k	46 512k	93 1Mb
FDC	17	24	49 inc ser and par ports
Floppy	51 360k	62 1.2Mb	62 1.2Mb
HDC		37	On drive IDE, 8K cache
Hard Drive		150 20Mb	253 42Mb, 27ms, 8Mbps
Monitor card		21 MGA	21 MGA
Monitor		79	79
<b>Total of parts</b>	<b>266</b>	<b>647</b>	<b>961</b>
<b>Our kit prices</b>	<b>219</b>	<b>591</b>	<b>899</b>
including the same items		Prices exclude VAT and Delivery	(MS DOS - 39.00)

Kits also include full assembly instructions and diagnostics, many configurations available. Full range of Barebone Systems and Add-Ons at equally competitive prices. E.g 386SX barebone - 359.00, 386-20 Barebone - 604.00, 1:1 MFM/FD Controller - 65.00, 1024x768 VGA Card - 85.00, VGA Colour Monitor - 250.00, Baby Tower Case - 55.00

So if you are thinking about building your own machine to find out what really makes a PC tick or to save some money and would like a kit that really is a kit - or if you are interested in our Barebone Systems or high quality add-ons.

For a brochure, price lists, spec lists etc. Contact:-

**3TH Ltd, P.O. Box 482, Oxford OX2 9RP Tel 0865 791452 Fax 0865 794267**



TECHNOLOGY  
TECHNIQUES  
TRAINING





Probably the largest and most dynamic software development house in Scotland, is currently seeking

new and experienced  
**PROGRAMMERS**  
**GRAPHIC ARTISTS**  
**MUSICIANS**

For all major European and American Computer Formats.

- ★ Major titles offered
- ★ Excellent rates of remuneration
- ★ Full technical and equipment backup.
- ★ Very flexible working hours and environment.

CONTACT : Martin Kane,  
 ICE Software,  
 244 Bath Street,  
 Glasgow G2 4JW  
 TEL : 041-332-9007  
 FAX : 041-332-8986

## THE CODE MONKEYS

**GAMES PROGRAMMERS AND  
 GRAPHIC ARTISTS**

We produce state of the art software  
 for consoles and 16 bit systems.

Interested in joining us?

Send a full C.V. and samples of your  
 work to:-

**The Code Monkeys**  
 Unit 39 Concourse House Estate  
 432 Dewsbury Road  
 Leeds LS11 7DF

**Tel: 0532-710996**

If you would like your samples returned  
 please enclose a stamped addressed  
 envelope.



We require quality 8 bit programmers  
 for the following projects.

**CBM 64 programmer**  
 for Commodore Console game.

**CBM 64 programmer**  
 for Adventure system.

**Z80 programmers**  
 for conversions of major licensed games.

Plus we need a **GRAPHIC ARTIST** with  
 both 8 and 16 bit experience to work in  
 our offices.

If you think you are one of the people we  
 are looking for contact Richard or Mark on  
 0423 501595

**ENIGMA VARIATIONS LTD**  
**13 North Park Rd**  
**Harrogate HG1 5PD**

## DO YOU WANT TO BECOME A PROGRAMMER?



Established 1968

Move across to the rewarding  
 world of IT.

We have a series of short and long  
 term training programmers in  
 Computing and Information  
 Processing.

- \* C & G 424/425 Certificate in applications programming.
- \* C & G 418 Computer Programming & Information Processing.
- \* Evening courses in DBASE, WP, Spreadsheet Analysis.
- \* Evening courses in Pascal, BASIC & COBOL.

Contact Central London College on  
 01-580 4596.

**TRAINING FOR YOUR FUTURE**



# TECH TIPS



Does your PC keep packing up? Is your Amiga less than friendly? Would your ST try the patience of a saint? Write to Keith Pomfret's Tech Tips and we'll soon see you right. Send your sorry stories to Tech Tips, Beauford Place, 30 Monmouth Street, Bath BA1 2BW.

## ■ HELP! Amiga upgrade

When I bought my Amiga it must have been old stock as it had Kickstart 1.2. I've bought Workbench 1.3, but I need Kickstart 1.3 to use it to its best advantage. I am competent to change the chip and understand that the chip is only £20. Are there any unforeseen problems to changing the chip?

Andy Melling, Walthamstow

If you know what you're doing, there'll be no compatibility problems from fitting the new Kickstart ROM and if you shop around, you can probably get the chip for as little as £15. If you really don't want to mess with your Amiga's insides (if it's under a year old opening it up will blow away your guarantee.) Take it back to where you bought it and get them to do the work. It will probably jack the price up to about £40-£50, but that's cheaper than a dead Amiga.

## ■ HELP! Apricot jam

The Cream box that sits in a corner of the garage must have a use and I'm relying on you to tell me what. It is an Apricot computer and was given to me a couple of years ago when the company upgraded to PCs. It has a colour monitor and a remote

keyboard that works like the remote control of a video, sending a signal to the main box.

There is a 3.5 inch drive and a full set of disks with it, but there we come to a problem. There is only 256k of memory. It runs MS/DOS but I can't get any of my PC software to run on it.

The bright orange disks that came with it claim to be a word processor, the MS/DOS operating system and something called Async. Is the patient worth surgery or is euthanasia the only answer?

Trevor Cant, Haltwhistle.

Let's clear up some confusion first. The machine that you have sounds like an Apricot F1. This is an MS/DOS machine that uses MS/DOS 2.1 or thereabouts. This doesn't automatically make it PC compatible. Depending on the BIOS, it may or may not be able to read and write PC disks, but will not be able to run PC software.

The bundled word processor that came with the F1 can write a file that can be read and converted by PC word processor protext so if you've got a later version with the ability to use PC disks, you can use the Apricot to word process at home. The Apricot also has standard serial and parallel ports and can be connected to most printers and modems, although special drivers may be needed to get

good results from some of the more complicated printers.

Async is XModem comms software. Using this and an appropriate modem, you will be able to use the F1 as a terminal to go on-line and access all of the on line services and bulletin boards that are available for the cost of a phone call.

## ■ HELP! ROMBO, First Blood

My computer is an Amstrad CPC6128. I have a colour monitor, DMP2000 and several serious programs as well as the normal load of games.

At a recent show at Earl's Court there was a stand showing a peripheral add-on that allowed you to mess about with a TV set and get the picture from the TV on to the computer screen. The computer was a PC, but someone at college says that ROMBO did it. I am probably being wound up, but I'll risk it if only to find out if it's possible to connect a TV camera to my CPC and save images into a DTP program such as Stop Press which I have.

Mike Hunt, St Annaland, Netherlands

You aren't being wound up, although your address and the fact that you were at Earl's Court suggests that I might be being teased a little. The product that you describe does exist

and with the appropriate software, allows you to digitise a 'live' picture from a composite video source in real time. It is from ROMBO (not RAMBO) and is called VIDI CPC. You won't get as pretty a result using the CPC version as it's an 8 bit setup and is limited by the display resolution that Amstrad built in.

The PC version on show at Earl's Court was a VGA model with almost photographic resolution. While you won't get this quality, you will get a much better (and recognisable) illustration than if you tried to draw with an art package. VIDI is able to save a picture from a video signal in all three screen modes, but if you wish to use it with Stop Press, you'll find that mode 2 is the best as it is already monochromatic.

Stop Press has the ability to digitise straight into the page and it's quite amusing to look at a laid out page on the screen where the illustration is moving in real time animation.

The theory is that you can overlay the video signal into a box and snapshot your illustration straight in. This isn't too bad using a still image or TV camera where adjustments can be made, but is difficult with moving video.

The simplest way is to save the image that you require using the VIDI software and load it onto a blank Stop Press page for editing. When the result is as you wish, you can save the image as a screen or cut-out to be loaded into the prepared page.

One warning, however, is that VIDI works from a composite video signal of the sort that can be found on the outputs of video recorders, video cameras etc. It won't work from a modulated TV signal or an RGB/sync signal. This means that you'll need a suitable video or camera to use it.

## ■ HELP! Out of fashion

What about the Newbrain, Dragon and Nimbus. Information please.  
Terry Doughty, Co Donegal.

What about them indeed? If you want a weekly column for them, no chance. If you want news then keep your eyes on the news pages. If anything newsworthy happens to any of those machines, Express will be the first to know about it. If you would like contacts, here goes:

Newbrain Support Group, 70 cranberry Lane, Darwen, Lancs. Nimbug, 13, Belle Vue Ave, Gosforth, Newcastle Upon Tyne. Dragon, 6 Navarino Road, Worthing, Sussex

If you find any more, please let us know so that we can include them in our pages.

## ■ HELP! Oric information

I've an ORIC and an ORIC ATMOS. They were bought at the time when both machines were popular and have given me immense pleasure. Interest in these fine machines has now dropped off and even the local software supplier no longer wants my cash. I collected over 240 programs for the machines so it's not as if I'm starved of software.

Machine code came easily to me and a few months of sitting up all night wrestling with hex have left me with some interesting home-grown programs including a mouse driver and a document processor. The mouse driver works with the AMS mouse from an Amstrad CPC and the document processor is a poor man's DTP program with all the text and box manipulation modes, but no way to import graphics.

Are there still any clubs out there that I could join (preferably locally) where

people are not ready to dump a good machine just because a new one has appeared. I enclose a SAE for your reply.  
William Hurst, Aylesbury, Bucks

I won't be breaking any secrets if I tell you that you've no further to look than your own back yard for an ORIC user group. The ORIC user monthly is edited and distributed by Dave Dick, 65 Barnard Crescent, Aylesbury, Bucks HP21 9PW. Watch the Express user groups pages for other groups appearing.

## ■ HELP! Cryptic clue

Codes and Cyphers fascinate me and a friend and I are working on a third generation factorial encryption and decryption system that could revolutionise data integrity. In this country there seems to be little or no

interest in this fascinating hobby, but I understand that there are groups of code and crypt coders in the states. Have you any addresses of them?

Malcolm Jagger, London

The only address that we have for an Encryption group is the American Cryptogram Association, 5052 Chestnut Avenue, Pierrfonds, Quebec, Canada.

However, if you come up with anything particularly whizzy in the encryption/decryption world, I don't think HM Government would be keen on you giving it away over the water. All good ideas of a sensitive nature should be offered to our own people first. The only trouble with this is that search as I did through the phone book, I couldn't find anything listed under Spies, Secret Agents, or MI5/MI6. If Britain's Spymaster would care to give me a ring on the secure line, I'll pass on your details.



**OPENING TIME**

**A** new age has dawned. Germany is again unified and Centrefold has an extra page. To celebrate these momentous events I took Tarquin St John-Sprout and Ms Hanks (she was clad in a fetching puce and magenta bobble-suit with matching lycra accessories) out for a swifty - they're not talking to each other since Sprout managed to blag a free Mega Drive from his sanitation contacts, while Ms Hanks ended up with a Spectrum Plus 3.

We discussed tactics. First off, it seems that no-one out there uses software, as none of you have bothered your faces enough to send in any charts. Secondly, it appears that the one section you lot really do like is captioning pictures. With this in mind I have decided to run a massive caption gallery in a forthcoming issue. Unless the response picks up, the reader charts are dead.

Once that was sorted out, I stubbed out my Old Ferdie's Shag and Cancer roll-up in the boot polish tin which passes for an ashtray at the Hack and Laserwriter (our local) and sent Sprout and Hanks on their ways.

There I sat mulling on the recent disappearance of my spanking new colour 486PC and the fact that my next door neighbour Barry [Boy] Skuzz appears to have an immense smile on his face. You can't tell with some people, and Barry's ability to play *PGA Tour Golf* has improved 10-fold since last Tuesday when the machine went missing.

Three pages will take quite a lot of writing I can assure you. And seeing as I'm training old Gazza (Kasparov that is) for his match with Deep Thought, I am looking to you, my dearest, most perceptive and perspicacious 'Folders to contribute your glorious writings (do you think they'll fall for that load of flannel? For goodness sake remember to sub this bit out!). That said, you can get out of this column and don't come running back to me when you get your legs sheered off in a freak Magimix accident.

# Tim Smith's CENTREFOLD

Write to 30 Monmouth Street, Bath BA1 2BW (if you dare)

**Letter Spray**

Want to see your name in print? Then write to Centrefold. This week's replies by Mrs Marple's dog handlers chaperone's son's divorce lawyer...

One thing about putting these pages together every week is that my esteemed colleague Haydn Fitz-Williams (*are you sure I have to call that puffed-up berk a colleague? Please remember to sub this bit out as well*) and I get to go out to L'Expensivé Vache and discuss letter reply techniques. This week he suggested I try to be less aggressive in my replies. With this in mind I will print the first letter in the sweetest way I know how.

Sir,

As a keen non-computer user (*I'm not saying a word*), as yet I have liked the interesting articles and the keen pricing of New Computer Express.

You did invite comment, however, on the pictures in the Centrefold of September 22 issue (two ladies, not Julie Andrews etc). This just seemed out of place in a serious technical magazine - I think it is bad taste, and can offend people, even in the 90's. Some would label it 'soft porn', which I believe can be harmful and lead to sexual offences, deviations, degradation of people etc.

Also I did not find some of the frivolous comments and swear words, albeit few, necessary.

Maybe other readers will agree with my point of view. I think it could cost you readers.

My personal morality as a born-again Christian does make me take this stand. I feel a change of style of some of the articles would mature, make your magazine one that pleases for literary, as well as technical reasons.

Editor, you need not respond to this 'complaint', but just 'take note', if you wish.

Yours T P O'Reilly

Dear T P,

*I wish you could have read my reply to the Android from Rhyl in last week's Letter Spray. But there you go. I take your 'criticisms' 'on-board'. I read your 'complaint' and 'I do take note'. I will refrain from printing anything which might be offensive to anyone ever again (Do I really have to keep grovelling and being pleasant to people who can't make the distinction between pornography and cheek? It's making me ill. Cancel those pictures of Venus rising from the waves and Narcissus looking in the pond. Oh*

and do the usual, sub this out too, cheers)

Dear Tim (*watch the familiarity, chummie*), Why don't you put something there like 1001 good things about Ken Mosley etc (nobody would read 'em because nobody would believe them).

If what I read is true, that you are returning to eight reviews instead of just one, HURRAY!! One review was an outrage for us Amiga owners (with a god complex, but then don't all 16-bit owners have some sort of complex, especially with the Amiga v ST v A3000 debate which provokes some fiery letters)

Yours, Philip Young

PS What is "Still Staff Writer" supposed to mean in Issue 96?

PPS When Express reviews a game (eg *Populous*) do they keep it or return it to the producers?

*Dear Philip, Ken Mosley went in last week. I find game reviews about as interesting as Barry Norman's TV spot, and about as useful. Still 'staff writer' meant that I am still a staff writer. And yes we always return the games... or do we??*

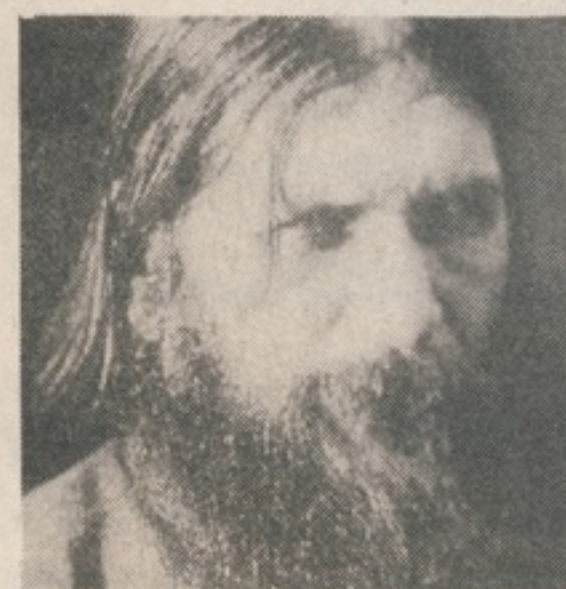
**WIN FREE TICKETS TO THE ALL FORMATS FAIR**

The Centrefold has at least 30 free (£3) tickets to the next All Formats Fair. This will be held at the Royal Horticultural Halls in Victoria, London on Sunday 4 November. You could win one. The only proviso here is that there must be no multiple entries. All you have to do is send me a picture of any of the last England World Cup squad. These can be taken from anywhere, even your own drawings. Remember to include your name and address. The competition works on the first out of the hat principle. Entries must be received no later than Friday 25th October otherwise I won't be able to get the tickets out to you in time for the 1st.

**I WISH I'D SAID THAT****I WISH I'D SAID THAT**

"Though the game is graphically unimpressive it's very satisfying landing a hit on an enemy tank and this can look fairly impressive" Er yes, CU Amiga reviewing M1 Tank Platoon.

"M.A.G.I.C is short for Multi-Access Graphic Image Controller, however we prefer to call it the NOB-BOX" Yes, indeedly, it's a genuine press release from Datapath (Excellence by design) of Derby.

**READER CHART**

We had another seance this week, and managed to get in touch with your friend and no one else's... Ra-ra Rasputin Russia's greatest sex mashin. Here's the mad monk's top 10 software.

- 1) AAhhghghhhh you are in my power!
- 2) Oh, computers hokay... how's about Time Slicer?
- 3) Out! Out! Demon spirits! Sorry, I quite like Prolog-86 Plus
- 4) Borland Turbo C-V2's really good as well
- 5) Mmmm how about Superbase Professional?
- 6) Then there's Lotus 1-2-3, it's a classic you know.
- 7) Games, games? Go on then, Bobble Bubble?
- 8) Oooh, oooh, I know... Robocop IV. Well I can see the future
- 9) Yes, excellent! Player Managcr. It's brill.
- 10) Now give me your wife and all the booze in the house you filth!

**THE TOSH TEN**

Every week it's trash and this week is no different. Here are 10 ways to appear cool with computers.

- 1) Own a NeXt machine
- 2) An unleaded PCW
- 3) Don't own a Dragon 64
- 4) Get a butler to format your disks
- 5) Borrow a NeXt machine
- 6) Volunteer your hard disk for the SAS
- 7) Carry a picture of a NeXt machine
- 8) Use your Psion as costume jewellery
- 9) Pretend to carry a picture of a NeXt machine
- 10) Get to Elite status in Elite.



# TREFOLD

## Tale Spin: Stories from the other side

This is the section of the magazine where veracity, is cast aside like so much encrusted deodorant 'neath the armpit. Stories and points of interest rule the lines. Send your interesting bits in as soon as possible.

### FREUD'S FAVOURITE CASE

A reader was kind enough to send in what he thought was a highly amusing top-ten chart which featured 'Ginger Beers'. Such entries as 'Back to the Wall 2', 'Lords of the Rising Bum' and 'Ultimate Tarts'. I'm sure he missed Alan Turing and Michelangelo by accident. For those innocents among you the term 'ginger beer' is slang for queer, which is slang for homosexual. You know what they say about people who go on about it. Now, can we please get back to computers.

### AREN'T PEOPLE THICK?

Oz is a gent who I hope that we will all get to know better (more letters Oz). He works as a programmer, and disabused me of my long-held belief that such people are humourless nerds. Here's a few of his stories:

A secretary had rung a support department regarding a problem with the back-up procedure on a system we had recently installed there. I am told the conversation went a little like this:

Secretary: It says insert

disk 3 then press key

Support: Have you tried inserting disk 3?

Secretary: I've tried but it won't fit in with the other two. It is not uncommon to receive 5.25 inch floppies through the post with compliment slips stapled to them. On one occasion we requested a copy of a disk to be sent. A little while later, we received a fax of a photocopy of the requested floppy.

The real killer in my opinion was a terminally efficient secretary who had invented a neat filing system for back-up disks. The computer went down, so we sent a support manager to restore their data files. Upon arrival at the user's site our man asked for their back-up disks and was presented with a ring binder full of neatly punched disks.



Gazza prepares for deep thought

### CHESS FANCY THAT

Anatoly Karpov and Gary Kas-

parov are playing with each other again. The World Chess Championship is in motion. But did you know that Karpov played *Deep Thought* - the world's porkiest chess engine - last February? The *Scientific American* recently ran a superb article about it. Karpov, playing white, won the game when *Deepy's* programmers pulled the plug on move 65. They then went away and did some tweeking. Kasparov is due to play the beast soon, what does anyone think of his chances?

### SCARY OR WHAT?

There was once, and maybe still is, a military theory called 'launch on warning' or LOW. It followed the line that you could pre-program computers to launch missiles if you thought that the enemy was going to hit you. Your computer could declare war. In the case of the US of A this meant bypassing the President.

In 1984 Computer Professionals for Social Responsibility decided to take the US Defence Department to court over LOW - the DD claim not to have heard about it. The CPISR claimed that the constitution held that only the Pres and Congress had the power to declare war. June '84 saw the lawsuit filed in which computer-declared war was to be seen unconstitutional. The upshot of the story... ? Unsurprisingly, the case was dismissed.

## FROM THE ARCHIVE

What do you remember about what you were doing a year ago this week? Do you recall what was in the news? Well stop agonisingly wracking your brains and read on... It's the Archive.

### HACKING K'OFF

"Innocents will be corrupted" says computer lawyer. Well the lawyer wasn't actually a computer, he was 'leading barrister' Alistair Kelman and he was commenting on recent recommendations to a new hacking law. The theory was that the law which would derive from them would be too stringent and would tar comms dabblers with the same brush as the serious hackers.

### ANOTHER SUPER FAST PC

Hewlett Packard announced the Vectra 486 PC. It was said to be the first personal computer to use Intel's i486 processor chip. It also used the 'controversial' EISA standard, rival to IBM's MCA. The Vectra was also said to be able to rival some mini, and even mainframe, computers.

### GARBAGE IN

The world's first talking rubbish bins were installed in Wrexham's town centre. We said: "The bins are limited in their computing capabilities but their main function is to talk. They can be programmed to speak in any language." The bins said: "On behalf of the council and advertisers, thank you for keeping the town clean." The bins were also ecologically sound being solar-powered. They also cost £1,000.

### CD GOINGS ON

Mirrorsoft, like the rest of us still unaware of the Turtles, decided to invest £5m into developing CD-ROM products. The first planned launch was to be the Guinness Book of Records.

### I SHOT THE SERIF

Nintendo's marketing people, Serif, were planning a major TV advertising campaign for Christmas (sound familiar?). The ads were to show the full range of Nintendo product, including the friendly robot - it was to be all happy families.

### TO RUSSIA WITH LOVE

A PC manufacturer won a £250,000 order to export its XT and 286 machines to the Soviet Union.

## THE WINNERS Aren't quite here yet

I know that you all think I keep you in suspense about who has won what prizes and when and I'll tell you why. The entries come in a dribs and drabs and I don't want to treat you readers like a bunch of brainless beings who don't deserve the full potential of my time. So, what I am going to do is run a massive winners section the week after next.

In order that you get the chance to win something I am calling an amnesty. All you have to do is write in on the back of an envelope or postcard and tell me why you think that you should have won a prize even if you have never bothered entering anything.

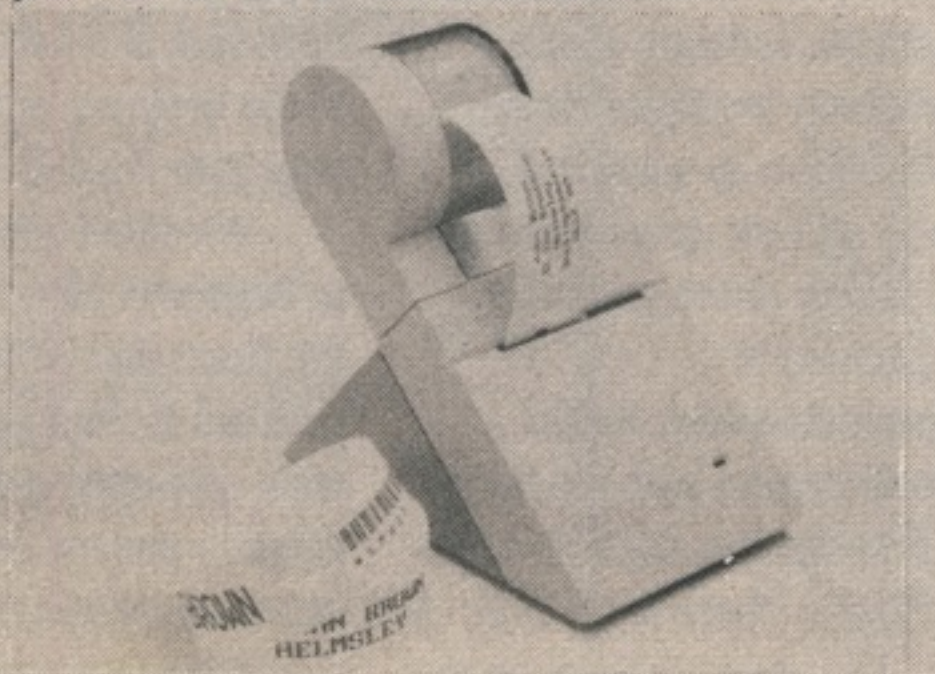
But before we go any further there are some rules, I like rules especially when they're mine, to be adhered to from now on:

- 1) Multiple entries are fine by me
  - 2) You should mark which issue your entry relates to
  - 3) You should cheat, lie and play the silly devil as much as you like as long as you are witty
  - 4) My decision is final and that's it jack!
  - 5) No correspondence will be entered into unless you send a photograph.
  - 6) That's the lot
- Cheers then and, hey, good luck.

## CAPTION FULL STRENGTH(I)

All you caption lovers out there should pay homage to Ms Hanks (our coffee machine operative who is presently locked in the dark room sobbing her little heart out). She saw this picture and immediately knew that it was worth a caption and, in her words, she went for it. Unhappily the news editor also saw it and demanded to use it in his 'more prestigious' news pages. Ms Hanks begged, pleaded, wheedled and threatened to hit him with her Gucci-copy candlewick bum-bag. Eventually she had to promise never to talk to him again, pay him £20 and, I quote "Stop wearing those bloody awful clothes."

Can you come up with a suitable caption? If so, please send it to the 'Get Ms Hanks Out of the Darkroom Memorial Competition' at the usual address.





## OUT OF TOWN TOP 10

The Gallup charts tell you what the country thinks is the Top Ten software chart. The Centrefold actually calls up shops and asks people on the front line. The first of our Out of Town Top 10s was compiled by Mike Wheble of Manchester's The Computer Shop. Find it at 121 Market Way, Arndale Centre, Manchester, M4 2EA. Call 061-832 0878 and ask for Mike, Ian, Brad or Sarah - tell them Tim sent you. For God's sake don't ask for Jeremy, he's the boss.

## TOP 10 8-Bits

- 1) *Lord's of Chaos* (Laser Squad, a bit D&D)
- 2) *Midnight Resistance* (Shoot 'em from all angles)
- 3) *TNT* (Compilation with Toobin and APB and others)
- 4) *Kick Off 2* (The only time West Germany will ever get to play again)
- 5) *Heroes* (Skywalker and Arnie kick some bottoms)
- 6) *Back to the Future 2* (Micheal J Fox the same size on screen as real life)
- 7) *Sim City* (Brain frying town planning)
- 8) *Dragons of Flame* (D & D™ influenced jobby).
- 9) *Subbuteo* (A sim of a game into a sim of a sim)
- 10) *Deliverance* (A sequel to Stormlord, nice graphics)

## TOP 10 16-Bits

- 1) *Battle of Britain* (their finest hour, not a bad game)
- 2) *Operation Stealth* (Graphic adventures)
- 3) *Shadow of the Beast II* (Psygnosis' scally style with the naked man)
- 4) *F19 Stealth Bomber* (Probably the best flight sim on the market)
- 5) *Corporation* (RPG + balls)
- 6) *Fun School 3* (The teddy bear's picnic)
- 7) *Loom* (Adventuresome stuff, a bit easy but fun)
- 8) *Wings* (Mike Wheble's fave game. A good solid flight sim)
- 9) *Silent Service II* (excellent sub-sim)
- 10) *Midwinter* (Vector graphic, snow-capped weirdness)

Cheers to the Mancunian crew. More next week. Why not hassle your local shop into sending us a chart?

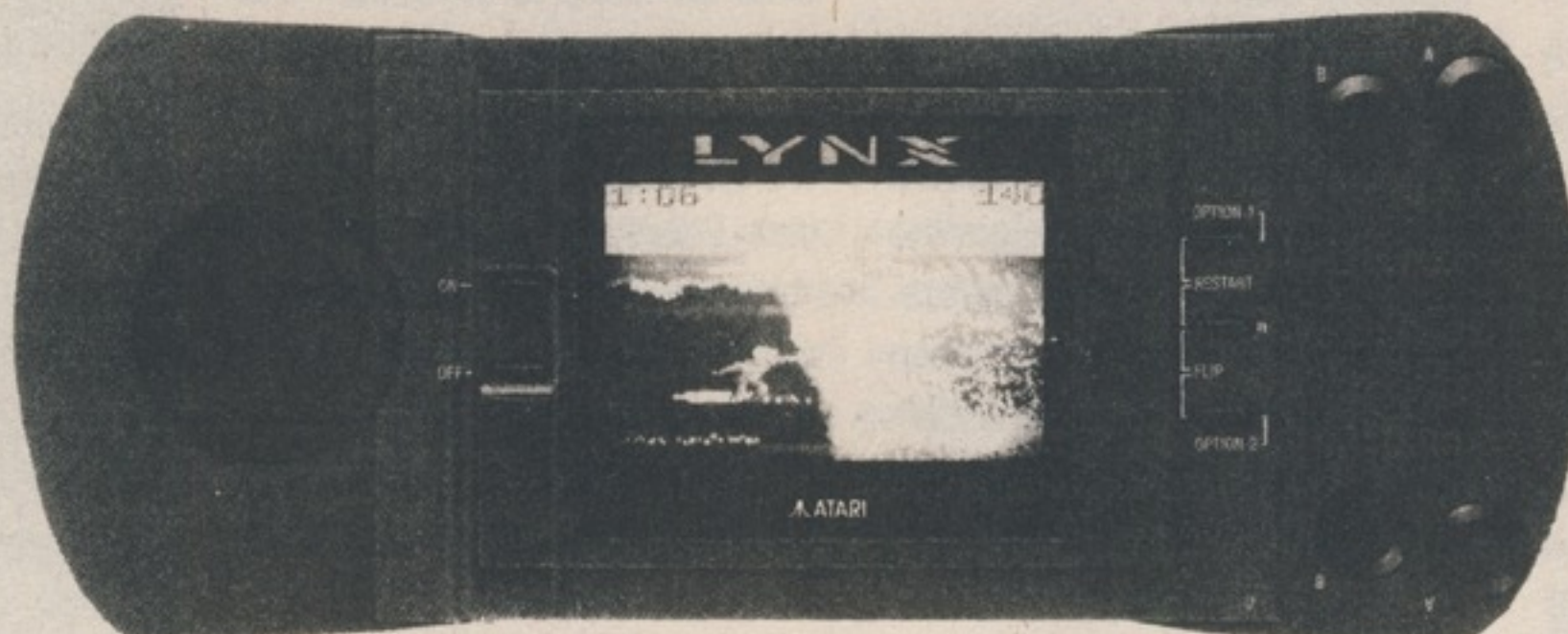
# WIN SOMETHING REALLY GOOD AT A BRITISH RAIL STATION IN BRISTOL AND STOP HAVING TO READ THIS HUGE HEADLINE FOR VERY MUCH LONGER

(look no Express train jokes)

Yes, for the first time in anyone's recollection The Centrefold actually has a reasonable prize to offer. It's going to amaze you so much that you're probably going to keel over in a dead faint and be incapable of collecting your winnings. Consequently, I get it. What is it?

It's a Lynx. Ooooh yes! Can you dig it? Can you feel the force of the sweetest little handheld games fun action pleasure-spot-hitting device since finger-bob Subbuteo?

The Lynx is from those fluffy little devils at Atari. You can play it in bed, on the lavatory, at the bottom of the garden or 20,000 leagues beneath the sea (as long as you're in a submarine because it's not waterproof, yet). It hits the £170 mark and has a whole bunch of games ready for it. You can win *Slimeworld*, a multi-play game as a starter. How do you win? S'easy. All you have to do is turn up at Bristol Temple Meads railway station with the coupon below.



Chuck it in a bucket on the Atari train and wait to see whether your name is drawn. No questions, no nothing. There's also free entry to the train which will be ready for boarding at 11 AM on the morning of October 23. You also get the chance to meet me, and

a few of the crew from little sister magazine *ST Format*. Good lord the 23rd is seven days before my birthfjfdk (Ok what heartless swinebrain subbed that?).

Finally, if you live too far away from

Bristol to get to Temple Meads; you might actually work for a living or you might even be at school, then all you have to do is send your coupon to me here at the Centrefold office, and I will take it down to the train myself.

I can't say fairer than that now can I? So get those coupons in as soon as you possibly can. And that's the advertising over with for this Centrefold.

## CRIVVENS! IT'S THE 'WIN A LYNX WITH THE CENTREFOLD' COMPETITION BY THOSE SUPER PEOPLE AT EXPRESS AND ATARI.

Please fill in the following if you want to win a Lynx.

My given name is .....

When stopped late at night I tell the authorities that my address is .....

The Centrefold should win Best Three Pages in the Middle of a Magazine. (please tick choice) YES ☐ YES ☐

This coupon should arrive at the Centrefold office no later than the morning of Monday 22nd October. Or you can bring it directly to Bristol Temple Meads railway station.

## DISPATCHES

A new series of articles in which the Centrefold's stable of foreign correspondents wire in the stories of the moment. This week we hear from our man on the East Coast - Joe Sixpack.



Joe Sixpack... a man and his hat...

### Yo there asshole!

Have I got some hot news for you this week. Lindybell-Billybob Binks and my good self headed up to MIT recently to check out the Artificial Intelligence labs. Far out.

They are developing a hunk of PC software which is so artificially intelligent that it already wants to leave the country and set up a rubber pet food bakery (there are still a few glitches) in Worcercestireshire, that's England. It runs from the hard disk and requires 640k RAM as a minimum. There is no VGA support but that is said to be in

the pipeline. For more information call Artificial Intelligences R Us on 0101-415 7636 83837 377373.

After this we decided to hire a 1959 Cadillac Fleetwood Convertible (series 62 that is boy) because of the extra-wide front seat and hard-wired Super Mario Brothers which you can play from the stick shift.

We didn't need to get back to Bootsville GA - the home of the Bootsville Wretches, best goddam football team in the west - also home to Lindybell-Billybob and my good self, too soon; so we went to see Conchillio Del Ramcaché.

Conchillio is one of the finest game programmers in the free world and has come up with a wump-pumalooa of a game called *Depopulous* - he was with Ollie North for a while. Available on the Mac, Amiga and PC it will retail for \$45. Call Deforestation City Kickers Inc when they get a phone.

That's it for this week, I'll expect to see the cash soonest. Say a big Bootsville "Hi y'all" to all my good friends over there in the UK and tell them not to worry about being a Third World country computerwise. Ride high and I'll check you soon.



# ◆ For Sale

**PCW 8512** £350 BBC B £250, RM-Nimbus X-10 £750, Juki 6100 £165, Tandata Modem £95, Dual 40T Drives £75. All excellent condition. Peterborough 0733 232931.

**ZX Spectrum** Plus 2, many brand new games including Shadow Warriors, Batman The Movie. All for £150. Ring Wolverhampton (0902) 25813.

**CBM64** with Database Mouse Art Package, Joystick £120. Games inc. Batman, Power Draft, 13 mags, vgc. All for £170. Ring Tring 7256 after 6 pm.

**ATARI Lynx** and six games £200 ono. Will exchange plus money for any megadrive games. Tel 081 560 0197.

**C64 tape deck**, Joystick, 160+ games inc. latest titles, manuals, etc. Excellent condition £125 ono. Tel (0277) 657485 Essex.

**RACE Maker** steering wheel, Joystick boxed barely used £25. Use on all computers. Contact Adam on Hawkley (073 084) 514 within school hours.

**XT Bridge** Board for Amiga 2000 with 5 1/4" drive, disks and books. Never used. £200. Tel (0886) 21599.

**1MB Ramcard** for Apricot XEN 1 £70. Apricot F1 system 720K drive, mono monitor £95. Rev 9 HD controller £40. Tel (03917) 77339.

**EPSON FX/MX/RX 100** sheet feeder £30. Brother CF300 sheet feeder £30. Sirius 10MB hard disk system £125. Tel (03917) 77339.

## CONSOLE MA'ZINE

The Ultimate Fanzone For New Video Gamers  
Latest News, Reviews, Tips, etc. for Megadrive, PC Engine, Gameboy, and other machines.

Send £1.30 for latest issue:

Console Ma'zine, 125 Arnold Road, Bestwood Estate, Nottingham. NG5 5HR. Cheques/P.O.'s payable to ONN LEE

**COLECOVISION** System and 35 games plus Atari adaptor and many Atari games and many extra offers. Tel (081) 560 0197.

**TOSHIBA T1000SE** notebook portable, locoscript pc, mouse, Diconix 150+ portable printer. As new. All leads etc. Ready to run. Phone Cambridge (0223) 247980.

**ATARA ST.** Loads of original games for sale from £2.00 or may swap. Phone (0352) 720603.

**ATARI ST.** GFA draft plus 3.13. Brand new unwanted software cost £149.95. Sell for £80. Tel (021) 422 7579.

**PS ION XP**, Comms Link, Developer, Formatter 32K Rampack, leather case, spread sheet, WP, finance, shaws book. Tel (051) 625 9963.

**CBM 64**, light fantastic pack, brand new unwanted gift £115 ono. Tel Mark (0860) 586513.

**MODEM** Dacom, DSL2123GT, V21/V23 £40. Brother M1109 Printer £60. Serial to parallel conv. £20. Phone (0375) 851706.

**LOADS** of mags for sale! C64, Spec, Amiga, ST, etc. Cheap. Old + very new inc. tapes + discs! Timo, 10 Valentine Way, Chalfont-St-Giles, Bucks HP8 4JB.

## A.S.C. COMPUTERS OF BIRMINGHAM

### ASC 286 AT - 12MHz Desktop System

HARD DISC	MONO	VGA
40Mb	£849.00	£1049.00 ex. VAT

### ASC 386 SX - 16 MHz Vertical System

40Mb	£1099.00	£1249.00 ex. VAT
------	----------	------------------

**021-766-7372 RING NOW!**

**BUY! SELL! EXCHANGE! REPAIR! NEW & USED**

**SPECTRUM +2** boxed with manuals, mags, plenty of games including Turrican, Impossamole, etc. for £90 ono. C Bennett, Hill House, Mead Rd, St Cross Winchester, Hants SO23 9RF.

**AMIGA** Hand Scanner Geniscan, GS4500 as new £120. Phone Ralph (0827) 51738 after 5pm.

**AMIGA** software (originals) Kennedy Approach, Powerdrome, Balance of Power 1990, Falcon Hostages and many more £70. Tel (0842) 765161 after 6 pm.

**AMSTRAD 6128** colour plus second disc drive, manuals, books, progs. £200. Tel (081) 567 3678.

**AMIGA PD** £1.50. SAE Chris Jackman, 3 Albion Terrace, Lexham Road, Litcham, Kings Lynn, Norfolk PE32 2QQ.

**SMARTTEAM 1200 AT** modem Hayes compatible. Auto dial/answer, tone/pulse 300 & 1200BPS boxed. For full details/offer send SAE to MB, L6/G/14 Owens Park, Manchester M14 6HD.

**NEW** Computer Express issues 1 to 52. Offers (0925) 860179 (Warrington) after 6pm.

## WHITEROSE COMPUTERS

**NO 1 IN WEST YORKSHIRE ... For ATARI ST & AMIGA**

ALSO .. A RANGE OF P.C. & P.C.W SYSTEMS, PLUS COMMODORE C64c - NINTENDO & ATARI VCS(2600) HARDWARE ALL IN STOCK.

SOFTWARE FOR ALL THE ABOVE PLUS .. ATARI XL/XE Cass, Disk & Cartridge/7800 - SPECTRUM Cass/Disk - AMSTRAD CPC Cass/Disk.

LEISURE/ENTERTAINMENT, EDUCATION, GRAPHICAL, BUSINESS & MUSIC PACKAGES ALL AT DISCOUNT PRICES 1,000s OF TAPES & DISKS IN STOCK!

MONITORS, PRINTERS, DISK DRIVES, RAM UPGRADES, CASSETTE UNITS, RIBBONS, DISCS, STORAGE BOXES, JOYSTICKS & INTERFACES, CLEANING KITS, MICE (C64 -ST - AMIGA - PC ETC.), PLUGS, LEADS, STANDS FOR PRINTERS & MONITORS ALSO DUST COVERS, CASSETTES, HEAD ALIGNMENT KITS & LOTS MORE!!

**CHECK OUT OUR ST P.D. LIBRARY OVER 220 DISKS NOW IN!!**

OPEN 6 DAYS A WEEK 10AM - 5.30PM WHITEROSE ARE TWO THIRDS OF A MILE FROM J26 M62 NEXT TO THE TRAFIC LIGHTS/CROSSING.

**WHITEROSE COMPUTERS : BROOKLYN COURT : BRADFORD ROAD : CLECKHEATON : W YORKSHIRE : BD19 4TJ : 0274-851131**

## COMPUTER REPAIRS

Fixed Super Low Prices/

Inclusive of parts, labour and VAT



FIRST AID FOR TECHNOLOGY

1 WEEK TURNROUND

\* AMSTRAD / SINCLAIR AUTHORISED \*

SPECTRUM 48K	£14	C64	£22
SPECTRUM 128	£18	VIC 20, C+4	£22
SPECTRUM +2	£27	1541 DISK DRIVE	£36
C128	£29	C2N TDECK	£19
C16	£18	C64 PSU for sale	£27
Amiga	POA	Atari ST	POA

Please enclose payment with item - 3 month warranty on repair.  
Please enclose advert with repair.

**W.T.S. ELECTRONICS LTD**  
(NCE 18 10 90)

Studio Master House, Chaulend Lane, Luton, Beds. LU4 8EZ

Tel: 0582 491949

(4 lines)

Standard terms of business apply

**ABILITY** integrated package WP, database, spreadsheet, graphics and comms. New Xunus ED, yours for £25. Ring Robert on (081) 864 3154.

**AMSTRAD SM2400** modem for sale. 3 months old about 10 H RS used £200. Tel (0709) 555463 and ask for Steve. Call Rotherham after 6pm week days.

**ATARI 520 STFM**, multiface, STOS, 15 games, 18 other disks, 10+ magazines, very good condition £200 ono phone (0963) 62372.

**COMPUTER** and electronics mags for sale, all types, good condition. Send SAE to J M Peters, 299 Southway Drive, Southway, Plymouth, Devon PL6 6QW.

**CBM 64** + 1570 drive + 1570 plotter + C2N deck and heaps of software new and old. Only £250 ono. Will consider split. Phone (0296) 82093 - Simon.

**ATARI 400/800/XL/XE** Educational software: learning music (4 disks) £4, pilot programming language (cartridge and 2 cassettes) £8, master typing (cartridge) £3. Tel (0799) 41599.



**EPSON** LQ1050 24 pin letter quality. Average selling price £580 plus VAT = £667. For sale only £500. As new, with box and manuals (0291) 424526.

**SOFTWARE** for sale. 115 games for 48K Spectrum £65. 15 games for Commodore 64 £10. All original cassettes. Tel (0902) 373638.

**AMIGA** 500 + stereo system, over 60 disks, box, Kick off 2, Turrican, Beast 2, dust cover, mouse, joysticks, leads, sell £500. Offers considered, will split (0254) 53195.

**For BBC B** Solidisk 32K sideways Ram with software and manuals. Also light pen with manual. Any reasonable offer. Worthing (0903) 211559.

**ATARI** 520 STE, stereo sound, 4096 colours, joystick, 26 games, power basic magazines, £300. Tel Southend (0702) 615886.

**IRISH** readers. Datatronics discovery 2400 Baud modem only £200. Internal modem only £140. Excellent make. External type suits Amiga and PC. Tel: Alan (0404) 67724.

## EXMOOR

The world of the Soaring Buzzard, of the Red Deer, of Lorna Doone and the Exmoor Pony. And now the home of Exmoor Software Public Domain library for the ST. - a library that is different, where it's not the disks that are listed but the individual programs. You choose what you want and we make up the disks accordingly. Send S.A.E. for full details

EXMOOR SOFTWARE  
Queen Street, Lynton, Devon. EX35 6AQ

.....  
Full range of Budgie Licenceware also available

**ALL COMPUTER HARDWARE AND  
SOFTWARE WANTED FOR CASH  
OR EXCHANGE**

**NOTHING REFUSED!!**

**071 727 0424**

**ATARI** ST replay 4 sound sampler, cartridge + software £25 to you guvnor. Contact Bryan Kennerley, 21 Graham Drive, Rhyl, Clwyd LL18 3RS.

**LOTUS** Symphony version 2, unused unwanted package £125. Tel (092 572) 2533.

**COMM** 64, light gun, over 55 games, books and manuals, tape into basic part 2 £150 ono. Tel Martin (0252) 874293 after 5pm.

**A+ GRI Lynx** 2 months old with Cal games and Gates of Zendocon £140 ono. Ring Greg on (071) 253 5764 after 4.30 pm.

**TANDY** 1000 (IBM compatible) 5 1/4 floppy drive, joysticks, lots of software, 14" colour monitor £250 (will split). D Stirling (051) 677 9786.

**ST Basic** with 322 page manual £5.50. Also serious ST contacts wanted. R Somerville, 56 Leamington Terrace, Edinburgh, EH10 4JL.

**PCW** Software Cracker, 2 prospell dial-up, many more plus games, Cyrus II, Chess, etc. Tel (0242 230638.

**MODULATOR** for Amstrad CPC range. Connects any CPC to colour TV. Unused £20. Tel (0925) 66591 (evenings).

**STE** Simms to upgrade 520 STE to 1040. 2 sets available £20 each. Tel Jim (0232) 241573 (day) or (0232) 794812 (evenings).

**FOR BBC B** Crossware Z80 Cross Assembler System Rom Disc and manual. Boxed as new £20 Worthing (0903) 211559.

**88 back issues** of NCE from No 13 onwards. Offer money or something Amiga related. Buyer collects. Phone (04023) 81033 (Essex).

**SPECTRUM** 128K plus 3 with multiface, 10 disks, 150 games still in box only £200. Tel (0272) 324230.

## DESIGNER - FOR KNITTING, EMBROIDERY

No more squared paper, pencil and eraser. Design your ideas on the screen and get graphic printouts. Build your own library of motifs. CPC disk with colour or mono and PCW.....£19.95

## PATTERN PUZZLES

A suite of 5 programs - difficulty can be set by user... "seeming innocent looking

...would try the patience of a saint" (8000 Plus)

CPC colour or mono (state which) PCW.....£11.50  
PC colour only.....£17.25  
Prices include P&P + VAT

**HTB COMPUTERS LTD,**  
Broadwater House, Broadwater  
Road, Romsey, Hants SO51 8GT.  
TEL 0794 516279

## SPECIAL BULK DISK OFFERS

### Bulk Packed Disks

	3.5" DS/DD	5.25" DS/DD
25	£11.90	£6.30
50	£22.44	£11.88
100	£42.16	£22.32

### Standard Packed Disks (Box 10)

	3.5" DS/DD	5.25" DS/DD
1-4	£6.02	£3.44
5-9	£5.87	£3.35
10+	£5.72	£3.27

All disks include label kits and are 100% error free, guaranteed for life. Branded disks available on request. Also printer ribbons, data cartridges, paper etc. Agents for Canon consumable products and Deanes computer office furniture. Agents for Imagineering, promoting the Ultra PC range. VAT and delivery not included. Prices subject to change without notice.

**TARMIGAN**

Education & trade  
enquiries welcome

Telephone: 0245 324976

# WANTED

DEAD  
OR  
ALIVE



USE YOUR VOICE  
TO OUTDRAW THE  
GUNFIGHTER

CASH PRIZES

**0898 31 35 94**

INFODIAL POBox 36 LS1 4TN Call charges 33p Per Min Cheap 44p Per Min All Other Times

**PC software**, Space Rogue, Fantavision, Home Accounts. All new and unregistered £50 or will split. Tel (0977) 675601 after 5pm.

**AMSTRAD** 1640 EGA colour display, twin 360K floppies, 32 meg hard disc full of software, dot matrix printer, mouse and books £750 the lot. Phone Chris (0524) 421400 after 6pm.

**AMIGA** 500, 4 months old, including ten games (Space Ace, Populous, Player Manager, etc) and joystick and demos. £250 the lot. Phone Chris (0524) 412400 after 6pm.

**AMSTRAD** PC 1640, EGA colour, dual drives, 32 meg hard card full of software, mouse, etc. Ring (0524) 421400 £750 ono.

**AMIGA** A500 1 meg, 2 drives, separate keyboard/cpu, Music X, Amas Sampler, joystick and games 8 months old worth £1350 sell for £600. No offers. Phone (0403) 66657.

**ICL DRS** 286 work station. 3 1/2 and 5 1/4 high density drives. 1Mbb. 4 OHD. For full details /offer send SAE to: M B L6/G/14, Owens Park, Manchester M14 6HD.

**DIABLO** 630 printer, prof. quality daisy wheel, parallel port, suit Amiga, manual. Tel (0977) 661179 (Doncaster).

**SPECTRUM** 48K+ 2 microdrives + interfaces, 142 printer Wafa drive multiface speech module modem 100+ games. All for £150. Steve (0858) 462985.

**AMSTRAD** PPC 640DD laptop with case inc. converter to turn TV into CGA monitor. Ring (0742) 583357 after 1900 hrs £250 ono.

**PRINTER**, 18 pin, Taxan Kaga KP810, Epson compatible. Good condition £50 ono. Phone Kings Langley (Watford/Hemel) (0923) 265539.



## DISKS

A limited opportunity to purchase certified disks at wholesale prices.

3 1/2" DSDD Disks @ 29p Each  
3 1/2" DSHD Disks @ 59p Each

MINIMUM QUANTITY 50 DISKS

100% error free, sealed & certified

Phone David Jones 081-986 7616

**AMIGA** A501 1/2 meg expansion + 3 1/2" disk drive plus 6 original games. £100 exc postage. Will split., eg. DD £40, Exp £40. Games £30. Exp + DD £65. Phone (0722) 790776 after 6pm.

**AMSTRAD** Disk, originals and cruiser, joystick. All excellent condition £50 ono. Tel (0202) 397920 ask for Tim after 4pm not Monday or Tuesday.

**CASIO** full size midi keyboard, 220 voices, 1000 variant backing tracks. I can deliver £210. Tel (0904) 636371 York.

**HEWLETT Packard** Colour Paintjet Printer £600. Pagesetter 2 £50. Digipaint3 £40. Mastersound Digitizer £20. Digiview Gold 4.0 £80. Call (0203) 316420 and ask for Kelvin. NO TIME WASTERIS!!

**AMSTRAD** CPC green monitor, four joysticks, games, one year old worth £800 sell for £420 ono. Ask for Paul or Peter on (0384) 235430.

**PCW** 8256/8512 Master Scan and Master Paint, Print Head, Scanner and Graphics software as new £45. Tel (0672) 810157.

**Let this advertising space work for YOU!!**  
**For Only £56**

**Contact Tim Partridge**  
**on**  
**0225 442244**

**ELECTRON** Plus 1 interface with view cartridge, cartridge game, loads of cassette games including Elite, manual, books, magazines, some with cassettes. Yours for £90. Good condition. Tel (0235) 814806.

**SPECTRE** GCR - Mac Emulator with manual updates turns your Atari into a Mac-Plus. £300. Call Les on 051-733 0369 after 6pm.

**ATARI** 520 STFM with 1 Meg external drive. Still under guarantee. Lots of games with leads, etc. £200. Tel (071) 474 9760.

**ATARI** 1040 STFM, £290 ono, PC, speed STE, just £170! ST 512K Ram upgrade chips £30. Ring (061) 881 5663.

**AMSTRAD** PCW 8512, DTP, mini-office, scrabble, lots of books, mags, discs and ribbons £350 ono. Tel (0296) 436172 (Aylesbury).

**CASIO** FP-40 printer/cassette/interface for Casio Pocket Computers. 40/80 colum. Dot Matrix. Excellent condition £40 ono. Tel (021) 358 6688.

**MICRO** Vitec RGB colour monitor. Designed for use with BBC Micro, teletext or similar systems. Excellent condition £150 ono. Tel (021) 358 6688.

**ATARI** 520 STE, 1meg memory £100 of software, all boxed and as new £299 or swap Amiga. Tel (0630) 58329.

**EPSON** LQ1000 24 pin printer, slight fault, hence only £100. Also Ringdale Par/Ser Megabuffer (256K) £70. Phone Steve (0245) 329443 evenings.

**SCI** Sys. Turbo - Kasparov 432 chess, computer scruffy but strong £25. A Jones, 2 Town Mead, Oakford, Devon EX16 9EW or call (03985) 438.

**BBC** Model B, dual disk drives, Z80 2nd processor, monitor, SWR, DFDC, Roms, manuals, books, software £350. Phone (031) 6694096.

**SEGA** Master System, games, joystick, control, PAB, vgc. £100. Tel (0745) 337100 ask for Andy.

**C64** games, some on disk, all mint condition. Ring now for list and prices. Amstrad printer also for sale £90. (0543 424102 after 7pm. Ta)

**CPC** Disk software PAS, Cal MT + £15 Pocket Protext £10 Devpac2 £15 Firmware Soft 968 £10. Tel (051) 489 0500.

**STE** Computer. Seven months old with extras £330. Can deliver Scotland. Tel (0250) 5108.

## MODEMS! MODEMS! MODEMS!

Large stocks of major brands available at realistic prices  
Technical advice a pleasure!

**V22 (1200 baud) Hayes compatible from £75**  
**V22bis (2400 baud) Hayes compatible from £90**

Fax cards from £100

All modems tested, guaranteed & BABT approved  
**Supply Solutions: 081-566-3639. Open till 8pm Monday & Tuesday**

**CBM64**, 1541, C2N datassette AR cartridge plus many games only £175. Phone (081) 643 4949 after 6pm.

**AMSTRAD** CPC464 good condition, 30 games, light pen, colour monitor, joystick £180. Call Darren (081) 679 8258 after 7pm. Not Mondays or Tuesdays.

**CBM** 64, hundreds of games, tape recorder, power cartridge, joystick, mags. £150. Phone Joe on (0354) 54877 after 6pm.

**ATARI** ST, games, Run the Gauntlet, Western games, Draggon Ninja £8.00 each. CBM 64 Championship Wrestling, Gauntlet, disk £5 each. Mr Sibley, 65 Granby Close, Weymouth, Dorset. DT4 OSR.

**CBM** 64 games, Silkworm, Comb at Lynx, Combat School £2.00 each. Cruiser joystick £4.00. Mr Sibley, 65 Granby Close, Weymouth, Dorset DT4 OSR.

**AMSTRAD** 8256 PCW with printer, locoscript etc. £275. Phone (0744) 27067 Lancs.

**AMIGA** A590 hard drive, £250, 1084 monitor £120, A500 1.3, 5 months old, 1MB, £200 of software, £350. Call (0224) 824904.

**OVER** 40 quality Amiga games for sale. All originals. Total value £1000. Will sell whole lot for just £400 ono. Contact Anthony (0703) 440084 anytime.

**PRINTERS:** MT91 laser quality inkjet and accessories, worth £1100. Sell or p/x 24 pin. Also MT81 DMP Epson compatible with Maxafit £100. Call (0332) 3367642.

**520 STFM** 1 meg drive, 2 joysticks, mouse, over 30 top titles worth over £500, also Master Sound package. Sell for £349. Phone Prestbury 829410.

**AMSTRAD** PCW 8256 Sage Modem V21, V23, cables, docs, etc., minus software but ridiculously cheap, only £70 ono. Ring Simon (0904) 625016.

**AMIGA** games: Altered Beast £12, Op. Thunderbolt £12, Chase HQ £12, plus many more for full list phone (0243) 773220.

**ATARI** 1040 STE 2 meg Ram SCI 224 colour monitor 50 meg hard drive LC10 colour PRI inter second floppy and software offers - Colin (081) 751 5298.

**CPC** 464 almost unused bargain £80. Buyer collects or pays carriage (Milton Keynes). Chris (0332) 249855 (work).

**C64** software disk and tape all in new condition. Must sell many simulators and strategy. Tel (0543) 424102 after 6pm.

**COPPER** circuit board single sided, new 16" x 4" x 1/16" thick £40 for 100. Phone (0744) 27067 Lancs.

**COMMODORE** 64, datassette, blank tapes, two backup cartridges, 74 original games, books, manual, desk and joystick. Worth £750+. For sale £150 ono. Nik (0582) 596025.

**HOME BREW** software for the CPC's. Games, utilities, educational programs - cheap and disk or tape write to: A Sill, 19 Sherwood Drive, Skellow, Doncaster, South Yorkshire



**LYNX** + three games + power adaptor + comlynx cable £130. Still has 4 months warranty. Phone (041) 639 1567.

**AMIGA** Senator 1 mg disk drive for sale. Offers around £50. Phone (081) 440 0095 after 6pm.

**SPECTRUM** 48K plus monitor cassette player 100's of games soundbox, loads of mags and books £90 ono. ST Syncro Express £15. Call ev. (0954) 30528.

**SAM** Coupe, 512K, Int. 3 1/2" disk drive, latest Rom + Dos, leads and manuals, boxed, Ser/printer I/F, sell for £100. Tel: Dave (0285) 860342.

**FAULTY** ZX8116K Rampak gives odd graphic display, maybe able to repair. Also Oric 1 games as new £15 for ZX81 Rampak £6 for Oric 1 games. Tel (0246) 207765 anytime.

**AMIGA** PD as low as 50p! Send for list to Jazz, 74 Beams Way, Billericay, Essex CM11 2NR.

## ◆ Goods wanted

**GAMEBOY** cartridges wanted. Will swap or buy. Also cheat sheet for sale - over 60 Amiga or ST cheats. Send £1 to P Hickey, 3 Churchill, Edinburgh.

**PCW** 9512 required with or without printer. Also PPC512D. Tel (0604) 413601 evenings or (0604) 26223 office hours.

**WANTED** ST desktop publishing package like Fleet Street or Desktop or Pagestream. Will swap 13 top games. Tel Paul (0733) 78240.

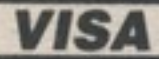
## KYC DISKS Once only bargain offer ! ★ DISCS 39p ★

Disc Drives....£60.00  
1/2 Meg Amiga A500 at....£45.00 (Postage & Packing £2.85)  
Amiga + ST software on offer  
Screen Gems at £359 Disk Drives at £65  
Posso Boxes at £15.95  
**All prices include VAT**  
Open 7 days a week!!! Cheques & Postal Orders accepted



### KYC DISKS

51 Barmouth Road,  
Wandsworth, London, SW18 2DT  
Telephone: (081) 870 0469 Mobile: (0860) 763 576



**CBM 64**, disk drive, printer, lots of software - tape and disk - extra add ons. All of it only £400. Phone (0442) 62554 after 6pm. Ask 4 Paul.

**MEMORY** upgrade chips (18) £15. Stands £5 each. Dr Halo £10. PC Dogs £10. Supercalc3 £10. Dynodex (Filofax type) for Apple £50. Tel (081) 542 2071.

**FULL** programming development system (consists of Amstrad PC, PDS card, Commodore 64 and disk drive). Phone Craig on (0472) 840271 after 6 pm if interested!

**LOOK** - Zenith PC + NEC Spinwriter and Mannesmann MT86. Updating system, need space. Offers! Del. poss. for some areas. Tel. Dave on (0734) 871054.

**TURN** your Acornmaster 128 into an IBM compatible 512 board with Dos, Gem and mouse £120 ono. Tel. (061) 486 9457 as new.

**LATEST** Amiga stuff, also I wish to speak to Jester of Quartex. Send stuff to Bob Hay, 21 Loser Road, Milton Keynes FR1 2SJ or tel 618324.

**WANTED**, BBC Master. Will buy or exchange for top class metal detector with extras, cost £500. Tel (0246) 826766.

**HELP** needed to match Tandy TRS80II printer to Amstrad 1640. Call Torquay (0803) 214413 evenings or write to Flat 3, Lucerne, Lower Warberry Road, Torquay.

**WANTED** Atarilynx or Gameboy type portable game machines with extra games if poss. Please tel. (0619) 626377.

**WANTED** Broken Amiga 500 any condition considered, must live within 50 miles of south Lincs. Tel (0778) 393470.

**WANTED** Multiface II plus Printmaster for Amstrad CPC 6128. Tel (0203) 362063 anytime.

### TOP MUSIC FOR PC



£139.00  
inc VAT



NEW  
SPECIAL  
PACKAGE  
PRICE

### VOYETRA:- PC MUSICPAK 4

Sequencer Plus Jr: 64 trk.32 Midi Channel V22 Midi Interface: 2 in 2 out ports Music Network FREE sign up. Upgrade path to 4 port MIDI. SMPTE sync.

#### ★ FULL SUPPORT FOR ★

**SOUND CARDS,**  
Roland LAPC-1,  
SoundBlaster, AdLib Card,  
IBM MUSIC feature

**MIDI INTERFACES**  
MPU-401/IPC/IMA  
V4000/4001, V22/24/sm  
MQX- 16/32

### SPECIAL PACKAGE DEALS!

RRP

CMS!

Roland LAPC-1 Card + MCB1 Midi Interface + Ballade Software V2.....	£657.95	£579.00
Roland LAPC-1 Card + MCB1 Midi Interface + Sequencer Plus Jr V4.....	£513.00	£479.00
SoundBlaster Card + Midi Interface + Sequencer Plus Jr V4.....	£270.85	£249.00
Voyetra Musicpak 4 + CM32L Roland Sound Module.....	£508.00	£479.00
Voyetra Musicpak 4 + CM64P Roland Sound Module.....	£928.00	£849.00
Roland PC200 Controller Keyboard when bought with any of the above.....	£179.00	£149.00

All prices include VAT. Please add £3.00 towards P&P. Please specify 3.5" or 5.25" media. Make cheques and P.O's payable to Computer Music Systems Ltd.  
Delivery is by 1st Class recorded delivery unless otherwise instructed.

VISA: ACCESS: MAIL ORDER 071- 482 5224

Computer MUSIC Systems Ltd 5-7 Buck Street,  
London NW1 8NJ



**ADAMSKI** N-R-G CD single wanted or Pet Shop Boys Opportunities (any format) contact Grainger on (0536) 67520.

**WANTED** Apricot F1E. Sensible prices please. Also required software (Wordstar/Cobol). Ring Nic (0392) 433579.

**WANTED** Amiga A2000 with or without monitor. Must be in good condition. Cash waiting. Ring (021) 471 3335 Simon.

**WANTED** V22bis modem for ST auto answer and dial pref. Tel (0383) 822930 after 6 pm, ask for Steven.

**PRINTER** head for Okimate 20 printer. G Power, 6 Renoir Mews, N. Bersted, Bognor Regis, W. Sussex PO22 9AU.

**WANTED** C64 Easy Spell. Newsroom. Clip Art. Print Shop. Please write to Paul, 42 Chesterfield Road, Worthing, BN12 6DD. Disks only please.

**PC** Software, any vga 3 1/2" games, DTP, Protex, Super Mailshot plus etc. Also Ad Lib, Soundboard wanted and internal modem. Must be reasonable (0782) 324799.

**WANTED** Pools Prediction Program for ST. Ring Dave (061) 442 6887. Electronic components also required.

**ATARI** "ST Adventure Creator" software plus manuals wanted. Swap for original software. Also looking for PD source code for the "Adventure Game Toolkit" games. Tel: (021) 422 7579.

**MX80TP** manual or photocopy needed. Ring (0256) 29994 ask for Tony.

**WANTED** please. Panasonic KX-P1081 operating manual for this popular printer. Phone Bognor (0243) 867565.

**WANTED** mouse for Amstrad PCW8000 series. Cash waiting up to £20. Phone (061) 799 1813.

**FLEX1** - Dump plus for Atari ST and Star LC10 (colour), and Vidi ST must be working and cheap. (0705) 453985.

**RISC** User issue 4 volume 1 wanted. Tel Dale (081) 771 9395.

**ANY** computer system wanted. Phone on Hackney 249 7637.

**PC** Engine CD Rom unit wanted. Swap for megadrive and Gameboy plus games. Phone Rich 051 922 7642 mornings only 10 to 12.

**USERS** manual Apple II Silentyper printer type A2M0032 wanted. Also full circuit diagram for printer and board. Cash waiting Hobden St Blazey. Tel: Par. (072 681) 7166.

### ◆ Announcements

**ATARI** ST/STE disk mag issue news, PD, DTP etc. Free! Send blank disk and SAE to Paul Sealy, 31 Hartfield Crescent, West Wickham, Kent.

**BEEB** Public Domain! Send SAE to: Rafael Jay, Onslow House, Weston Road, Bath, Avon BA1 2XX for catalogue.

**ZAT** the Fanzine for Spectrum and coupe users! Issue 4 out now. Interviews, strips, and more. Send 60p and stamp to: ZAT, PO Box 488, Tweeddale, Telford, Shropshire TF7 4SU.

**FDKIT** v316e is now available for the PC. The most talked about utility program of the 90's for your (almost) free copy - call (0604) 843034.



S.P.D.

## Strathclyde P.D.

Public Domain From North Of The Border (AMIGA ONLY)

S.P.D.

**Top 10 Demos**

1. Puggs in Space
2. Mahoney and Kaktus 2
3. Walker Demo II (meg)
4. Knight Animation (meg)
5. Exodus Real 3D
6. Alcatraz Megademo (3 disks)
7. Digital Concert II
8. Trilogy Megademo (2 disks)
9. Gymnast Animation (meg)
10. Newtek Demo Reel 3 (meg)

**Opening Offer**

**All top 10 disks only**  
**£1.10 each incl.**  
**P&P + disk.**

Free catalogue with orders over 5 disks

**Top 10 PD**

1. Soundtracker V4.0
2. Games Music Creator
3. All New Star Trek
4. Battleforce V3.6
5. Moria V3.0
6. Vaux Killer
7. Direct Action
8. Full Force 101 Utilities
9. Sid
10. Powerpacker V2.3B

**Prices:-**  
**1-5 £1.50**  
**6-10 £1.35**  
**11+ £1.20**

We can order any available Public Domain disks and supply them to you at our low prices. So why not buy them from us.

**Catalogue**  
 Send SAE (9" x6" 28p) + 50p for full list. Disk catalogue £1.00 + SAE

Send cheques/PO's payable to: **STRATHCLYDE PD**  
 23 Timmons Terrace, Chapelhall, Airdrie, ML6 8UT

**STEN** - ST enthusiasts newsletter - free, send disc and SAE for your copy. Dave Mooney - 14 School Road, Morningside, Newmains, Lanarkshire (0698) 382380.

**SAM** Coupe user group, we issue a by monthly magazine on disk for £1.50 per issue or 6 issues for £8. Contact Brian on (081) 689 1439.

**VETREX** game console for sale with many games. Now a collectors item. Any offers. Tel (081) 560 0197.

**RAMBASE** 2 34K Public Domain Database for the CPC 6128. Send disc, SAE, and £1 copying fee to S Fairlie, 20 Montague Road, Saltford, Bristol, Avon BS18 3LA.

**TYPING** For fast, efficient and what's more cheap service, phone (071) 625 8337.

**ADD** that pro look to a game/demo. Your own pictures/photos digised for Amiga. Send SAE to 20 Hammond Rd, Horsell, Woking, SY GU21 4TQ.

**COLOUR** printer driver No PD wanted for Centronic Printer on 386 using windows three quote price. D Price, 59 Lockwood Rd, Northfield, B'irmingham B31 1QE.

**ALEX** Kidd in high tech for the Sega Master System. How do you find the last peice of the arcade map? P Armstrong, 9 Lovetot Road, Rotherham.

**WANTED** Amiga 500 computer with modulator. Must be good cond. Ring John on 0904 798031. Good price paid.

**DESK-TOP** Publishing package for C64 on disk. Also citizen 120D (interface not important). Please write with details and price to Alan Cartwright, 25A Ingleton Ave, Anlaby High Road, Hull, HU4 6AS

**WANTED;** I590 hard drive for Amiga (good condition only). Also wanted: professional page and CG font programmes. Originals only. 0773 7499630

**GENOA** super EGA Bios 2.41 wanted - manual or information. Offers to: J Raskowski P.O. Box 878, Holloway, London, N7 8XY

**EPSON** PC + /HD manual circuit diagrams or workshop manual. Also same for FX80 printer. Phone Lous 0536 3090

**WANTED** for my ST Headcoach. Also 3 in 1 football. If you have them, then phone Kevin on 0724 842531

**APRICOT** technical manuals and software wanted for PC/Xi, F2, F1E. Also upgrades for same, drives, ramcards, internal modem, etc. Phone after 5 pm Swansea 0792 581524

**BACK** numbers of Quanta newsletters, QL user, QL world and other mags, books of interest. Please ring with prices. Mick 081 3027470

**NEW** Atari ST owner requires cheap software. Anything considered. Contact Nick, 61 Tabor Ave., Braintree, Essex, CM7 7SU

**64DEMOS** wanted on tape only cash waiting will pay for quality/quantity PD utils and demo. D E Mason, Ethorpe Hotel, Gerrards Cross, Bucks., SL9 8HY

**WANTED** for Spectrum 128+2A, disc-drive plus interface. Offer about £40 for pair. I am a pensioner. Thank you. Post and package paid.

**ATARI** ST software. Spreadsheet and database originals complete required. Roy 0252 24461 ext.3660

**I S DIGITIZER** sampling package, Atari ST £35. Timeworks DTP £35, Gunship, FOFT, K Spread, K Seka, Deflektor £5 each. Also Protex, Scrabble, GAC for CPC464 £25 the lot. Tel. 0633-216400

**HEWLETT PACKARD** colour paintjet printer and pagesetter V2 £600, worth £900. Call 0203-316420

**UNEMPLOYED** St-user seeks unwanted adventure software. All replies acknowledged. D Stanworth, Mid-Y-Don, Conwy Road, Penmaenmawr, LL34 6BL

## ◆ Personal

**PIRACY** free mail - traders wanted to exchange demos, utils, music, source code, etc. Write to Hal, 95 Argyle Road, Ripley, Derbyshire DE5 3LH. Please send return postage.

**WANTED** PC contacts all interests, send list or disk to Gary, 15 Simmons House, Sussexway, Holloway, London N7 6RX.

**TI99/4A** User offers help on software and hardware to other TO99/4A users. P Trotter, 80 Martonburn Rd, Grovehill, Middlesbrough, Cleveland TS4 2TH.

**PROGRAMMES**, Graphic Artists and Musicians wanted to start a group on the C64. Send demo tapes to N Price, 64 Plumberow, Basildon, Essex SS15 5LQ. Tapes not returnable.

**MODEM** + software for CPC 6128 for disabled user. Must be cheap. Can collect any distance. Geoff, 8 Markland Crescent, Clowne, S43 4NG

**PAGESETTER2** wanted (Amiga). Will swap other original tittle inc C Light, 688 Sub Attack. Tel. 0883 624 988 Paul.

**PCW** 9512 required with or without printer. Also PPC512D. Tel (0604) 413601 evenings or (0604) 26223 office hours.

**ST CRUSADE** in Europe by Microprose wanted. I will pay up to £15. Phone 051 645 2997 after 4 pm. Ask for William.



**100 3.5" DISKS WITH STORAGE BOX**  
**£34.95**

+



**100 5.25" DISKS WITH STORAGE BOX**  
**£34.95**

## Fantastic Savings!

All boxes come complete with dividers, two keys and are antistatic  
 All discs come with labels and are guaranteed 100% error free

**HUNMANBY COMPUTER SUPPLIES**  
**SUPPLIES HOUSE**  
**HUNMANBY INDUSTRIAL ESTATE**  
**FILEY, NORTH YORKSHIRE YO14 0PH**  
**Tel: 0723-891-888 (24 hours) 5 Lines**  
**Fax: 0723-890-836**

Free Delivery

ASK FOR FREE CATALOGUE

Remember - all prices include VAT and delivery! There are no hidden extras to pay! Personal callers welcome: Monday-Friday 9.30am - 4.30pm




## ◆ Services

**IF you own** a Sega Master or Megadrive phone John on (0532) 602284 - 2pm - 10pm (only in Leeds area).

**PUBLIC** Domain available, Coma, Cebit 90, Bacteria and Equalogo £1 each. Also wanted to swap stuff Mars 4, 27 Park View, Eagle Bank, Bolton.

**ATARI** ST PD enthusiast wishes to swap or sell PD. Hundreds of disks available. All aspects of st'ing covered. Phone Fraser on (031) 553 2356 for details.

**INFORMATION** on how good scanning/OCR services please. Jonathan Brazier, 354 Crookesmoor Road, Sheffield S10 1BH. Tel (0742) 684775.

**HI**, my name's Tony. I have a 2086 (yeah I know). How can I turn it into a (cheapest) 386 (sx) eg. mother board controllers etc. Any info on how easy conversion might be? T Paullazio, 77 Crispin Crescent, Beddington, Surrey CRO 4UJ.

**COULD** someone please help me use the PD program (Mac Bonyo) for the ST that claims to offer "Aladin" compatibility. Please phone 081 883 3812.

## THE MUSIC MATRIX

Magazines on disk for the ST and AMIGA - A UNIQUE RESOURCE designed to help the computer musician make the most of music and MIDI. The **ST MATRIX** has support for Korg M1/R, ROLAND D5/D10/ D20/D110/MT-32/D50, KAWAI K1/R/K4 YAMAHA FB-01/DX7/TX-81Z, with **SOUNDS** and **EDITORS** on disk for these and may other instruments. MIDI file sequences (MFS), source code in **ALL BASIC LANGUAGES**, along with **COMPLETE WORKING SEQUENCERS** eg **ALCHIMIE** the **NEW P/D SEQUENCER** which supports MFS. **D10 EDITOR - ISSUE 9**, **K1/R EDITORS - ISSUES 7 & 8**. **MT-32 EDITOR - ISSUE 3**. The **AMIGA MATRIX** Issue 1 has **IFF SAMPLES** from Korg M1 and 8 Voice Soundtracker. Issue 2 has more sound samples, **OKTALYZER SONG**, **MUSIC-X SEQUENCES** and **250+ VOICES** for ROLAND D5/D10/D20/D110. Issue 3 has **FB-01 editor** and **144 Voices** along with another **OKTALYZER SONG** from Matt West which includes **IFF custom samples** also more **Music-X sequences** Specialist Music/MIDI P/D libraries for both machines - Catalog disks available for only £2. (Please specify machine when ordering)

**NEW for BOTH machines - 500 VOICES for the KORG M1/R - with self-loading and useful SYSEX SOFTWARE - Only £30.**

The Music Matrix costs £10 per issue - OR ANY 4 ISSUES FOR £35.

**THE MUSIC MATRIX**  
**14, MAIN STREET, EAST WEMYSS,**  
**FIFE. KY1 4RU**  
**Phone 0592-714887**





**IBM PC Clone** at, 20MB hard disk, 3 1/2 + 5 14 hi density floppy, UG A colour screen, £750. 0444 400763 (West Sussex).

**CHEAP!** S/S internal drive \$15, Synchro Express V2 £110, Learn Assembler book £8, 30 great games : 3d Pool, B Money, etc. £5. Tony 0590 683245.

**AMSTRAD 464**, DDIdisc drive, TV tuner, colour monitor, loads of games, mags etc. excellent condition £160. Ring Emma on 0665 6036533.

**AMSTRAD 6128** software all originals, serious and game, inc Devpac 80, "C", Image Sys, Hits 6, Biggles. Call Gary on 0908 220486 (evenings).

**ATARI ST** single sided drive, have upgraded so asking £25 inc P + P. Phone Gary, evenings on MK 0908 220486.

**ST games** for sale many titles Xenon2 Babel many more. I have about 40 to sell inc. some serious stuff and a complete ST format. 0223351138

**AMIGA** video and graphic application software bundle. Deluxe video, productions, deluxe video, fantavison and more. Offers 0773749630

**AMSTRAD 1640 C-monitor** 20 MEG hard disc printer. VGC £650. Atari 130 XE new boxed datacorder PS leads EXT £75. Phone Peter Letchworth 0462684995

**FOR sale:** back issues of ZZAP! 64/Amiga, including cassettes. Nos. 16 to 66. Sorry, buyers must collect! Write to: Adam Wright, 33 Great Holme Court, Thorplands, Northampton, NN3 1TD

**128K Spectrum 14"** colour TV. £200 of software Romantic Robot, interface joystick and interface all for £00. Call 0614945497 after 7:30.

**AMSTRAD PCW 8512** with Mini Office Professional + 7 blank branded disks and case. £250 for the lot. Call Tommy on 081-852 8578 after 6pm.

**AMSTRAD 6128** colour monitor and TV. Also mono monitor plus loads of software £275 or will split. Tel. 0793-610325 (Swindon) anytime.

**SEGA MEGADRIVE** (Scart) with eleven top titles. Everthing boxed. Sell for £320 ono. or swap for Super Grafx with games. Tel. 0306-885003

**ATARI ST** games Stac, Pirates, Gunship, Scrabble, Starglider 2, Balance of Power - all with original docs etc. £45 ono. Tel. 041-632 9903 after 6pm.

**MSX-2** Philips NMS8245 - complete system. CM8833 monitor, 37 games on disk/cart, mouse, DSDD, MSX printer, datacorder, communications and business packages - £550. Phone for details on 0642-564932

**SPECTRUM UTILS** for swap, White Lightning, Gac, The Writer, Zues, want other utils, or Elite for +3. 0232 230410.

**CIG ORIGINALS** over one hundred boxed. Send S.A.E. or buy the lot for £50 + P & P. 44 Elm Park, Clonmel, Co. Tipperary, Eire.

**ATARI STFM**, 1MB drive, some games, mouse, cables, all manuals, language disk, good condition only 10 months old. Worth £290 will sell for £190. Tel. 081 681 1940 anytime after 7:30 pm. Ask for Joe.

**ATARI 520STFM** 0.5 meg drive and colour T.V. (can be separated), two joysticks, £500 + worth of software and blank disks. £230. Contact 0670 822647.

**AMSTRAD CPC6128** Stop Press and mouse £30. Rainbird Advance Music System £25. KDS 9 bit printer port £10. Phone 0795 471956 after 7 pm.

**SWOP CHINON CP7M** multi-mode SLR camera and zoom lens and dedicated flash for clean printer. Call 061 653 8535.

**TAXAN 12"** colour monitor model visonex RGB/comp. Lead for Amiga included. £75. Buyer collects (Bham area) 021 3512783.

**SPECTRUM GAMES** for sale. Please send S.A.E. to 203 Long Lane, Boulton, Lancs., BL2 6EX or phone 0204 23357 (for list).

**PCW 8512** £350 BBC B £250, RM-Nimbus X-10 £750, Juki 6100 £165, Tandata Modem £95, Dual 40T Drives £75. All excellent condition. Peterborough 0733 232931.

**ZX Spectrum Plus 2**, many brand new games including Shadow Warriors, Batman The Movie. All for £150. Ring Wolverhampton (0902) 25813.

**CBM64** with Database Mouse Art Package, Joystick £120. Games inc. Batman, Power Draft, 13 mags, vgc. All for £170. Ring Tring 7256 after 6 pm.

**ATARI Lynx** and six games £200 ono. Will exchange plus money for any megadrive games. Tel 081 560 0197.

**VETREX** game console for sale with many games. Now a collectors item. Any offers. Tel (081) 560 0197.

**COLECOVISION** System and 35 games plus Atari adaptor and many Atari games and many extra offers. Tel (081) 560 0197.

# 34p

INC. VAT & LABELS

## 3.5" DSDD INDIVIDUALLY WRAPPED DISKS

100% certified error free + guaranteed  
Add 1p for credit card orders  
40 cap disk box: £3.99, 80 cap: £4.49  
Hi-tech 12 cap library cases £1 each  
Postage - add £2.95 per order

Universal Overnight Distribution Ltd.

Enterprise Centre, Unit 26, James St, Carlisle, CA2 5BB.  
Tel: 0228 42373 ext 53. Fax: 514484

**COMMODORE 64**, C2N, S/ware, books £100. Also MSX boxed, tape recorder, some S/ware including assembler £65. Phone 0751 33313 N. Yorks.

**AMIGA BOOKS.** Amiga for Beginners, Basic Inside and Out, Machine Language, Tricks and Tips, Dogs Inside and Out, All Abacus, unused £9. 0224 824904.

**FOR SALE** STE 4 meg upgrade simms £160. If interested contact S. Black, 18 Paul St, Lochgelly Fife, KY5 9AL.

**AMIGA-AMOS** C/W extras disk only £25. Aegis Sonix £20. Both originals C/W manuals etc. Details tel 0692 402927.

**AMIGA 500** Plus 1/2 mega and extra disc drive and amber monitor still under guarantee. No offers. £350. 081 207 5837.

**CBM 1541-11** disk drive and 20 blank disks, hardly used and boxed. Only £80. Phone Jason 0753 660066 (Slough) 9am - 5pm.

**MAC S.E.** and 30 MEG hard drive and high res. mono. monitor. Sell for £800 call Dave on 051 4282280.

**AMIGA 500** hardly used mouse, joysticks, Batman, 10 Star pack, Superbase, Personl, Populace, Lots games, utilities over £500 total. Bargain £350. Tel. 0751 76882 N. Yorks.

**SEGA Megadrive**, Scaet Ten, latest titles, two joypads, leads, power supply, mint condition. £320 ONO. Tel. 0482 668669 after 6 pm

**SINCLAIR QL** with manual, software, games, typing tutor, joystick and 10 spare microdrives. Little used, less than 1/2 price at £79. Telephone 0582 768653 evenings.

**AMIGA A501** expansion genuine Commodore £50 cumana 3.5" drove £55 both mint and boxed with guarantee. 0705467943

**ATARI ST** "original" games, Oticitys etc for sale or swap. What have you for list write to Ricky 26 Fairfield Place, Ruesham worse, WR11 6HE.

**PUBLIC** domain for the IBM PC. 350 titles available for the price of a blank disk. Tel. 0533713867 for details.

**MEGA BRILL** games Rocket Ranger and Rick Dangerous for sale or exchange on the PC "RR" for £25 "RD" for £20. Phone Dave on 0265 51851.

**AMIGA PD** for sale. Lots and cheap. Send S.A.E. to : Jason Meachen, 59 Lee Road, Dovercourt, Harwich, Essex, CO12 3SB. (No callers).

**PROTEXT V5** word processor for Atari ST brand new! £95. Phone 0529 305611.

**SEAGATE ST-125N** hard drive, brand new £140. Teac FD-55FR 5 1/4 " disc drive for PC installation £40. Please telephone 051 678 7501, ask for Adam.

**EPSON HX-20** no manuals or PSU, built in printer and cassette recorder. Perfect working order. £60. Phone 041 551 0320 after 7 pm.

**1541 DISK** drive for C-64, 73 disks, games and utilities plus action replay cartridge. £100. Phone 041 551 0320 after 7 pm.

**YAMAHA SHS 10** FM digitalkey board midi out pitch bend etc £50. Phone 041 5510320 after 7 pm.

**MPS 803** printer plus spare ribbon, two word processing packages £80. Suit Commodore 64. Phone 041 551 0320 after 7 pm.

**HEWLETT PACKARD 33E** scientific programable calculator PSU manuals £30. Phone 041 551 0320 after 7 pm.

**ATARI 520 ST** for sale. Mouse, joystick, games, demos and PD etc. Worth £1000 +. £300 ONO. Tel. 0606 46769.

**AMSTRAD PC1640DD** mono display, DMP4000 printer, Wordstar, SuperCalc, Accounts Master, software included. All equipment unused, six months old, change of job forces sale £790. (0780) 782620.

**AMIGA Cumana** external 5.25" drive 40/80 track switch, on/off switch, 8 months old, £75. (0633) 858819 ask for Andrew.

**AMIGA 500** with 1 meg expansion, 2nd disk drive, modem and modulator, loads quality software disks, books, etc. Perfect condition, boxed £395 Adam 081-397 3546. Helen 081-399 9429.

## HIGH QUALITY AND PERFORMANCE 486 AND 386 MOTHERBOARDS

AT/386/25 MHz	OK.....	£450
AT/386/33 MHz	OK Cache .....	£725
AT/486/25 MHz	OK Cache .....	£1600

VGA available on request. 12 months warranty and telephone support. (Prices exclusive of VAT and carriage)

## BRITEC LTD

26 Avon Road, West Moors, Dorset, BH22 0EG  
TEL: (0202) 873421 FAX: (0202) 873421

**AMSTRAD CPC 464** colour monitor. Over £510 software/utilities. Manual. Over 35 mags. Light gun. Bargain at £550 ONO. Contact Adam Hawkey 073 084 514.

**BBC 'B'** 128 K, C/W green monitor, twin and single D/sided drives, joysticks, interface, business, ed. soft. £300. 0296 21227.

**COMMODORE 64C** computer. Disc/tape drives, reset box, £800 software, black discs. A1 condition £250 ONO. Phone Billericay 622168 after 6 pm.

**TOSHIBA T1200FB** IMB, Ram twin 720K drives, backlit screen. AS new C/W original software and manuals plus spare battery pack. £600. Yvonne 0985 213665.

**EPSON P80** battery/mains thermal printer C/W charger and mains adaptor. As new £75 or swap for Star LC10. Yvonne 0985 213 665.

**MSX** Toshiba HX10, HX-564, Wordpro, Computermates, 'MSX text/cards', cart games including 1942, Nemesis 3. Carts, programming books/mags, joysticks, datacorder £100. Phone for details on 0642-564932

**TRADE BINATONE** midi hi-fi with CD player and compact disc for Atari STFM or STE or Amiga. Cost £300 - contact Lee on 0226-758256

**OLIVETTI PR15** PRINTER for sale £75 ono. If your interested call Andrew on Preston 0772-314947 anytime.

**ATARI 10405STFM** C290, CM8833 £190, SM124 C85, LC10 £120, ST2nd drive £50. Many ST accessories. Ring 076286200. Ask for Roger.

**C64** software and books for sale. Bristol 864153. Ask for John. (wanted ST contacts).

**APRICOT XI** MSDOS 2.11. Green screen monitor. Twin 3.55 1.44 drives. Call Bob on 0903752351 with offer.



# TREASURE ISLAND

1 2 3 4 5 6 7 8 9 10

A B C D E F G H I J



**0898 313 586**

Infodial PO Box 36 LS1 4TN Call Charges 33P Per min Cheap Rate 44P all other times

**STAR** LC10 colour dot matrix printer. Excellent condition, hardly used £175 o.n.o. 081-995 2147.

**SEGA** Master System, joystick, 22 games including many top arcade hits. Bargain £250, worth over £500 (quick sale) Tel: Southampton 600560.

**DISC** boxes, 3.5" 80 capacity, 2 new £8, 2 used (as new) £6. 25 discs, DSDD, new, sleeved, £9 (surplus - backups, archived) Coventry (0203) 460410.

**ATARI** ST software, all boxed originals with instructions, sell the lot for £55. (04024) 57507.

**AMSTRAD** 6128 stereo amplifier tape deck, Clarion speakers, joystick, lots of mags and games and posters. Call Jaydeep 081-577 5861. Make me an offer, after 6pm.

**AMIGA** 2000, monitor, printer, hard drive, 2nd drive, video camera, graphics and sound software, 300+ PD disks, games + more £2,700. Tel: (0933) 50691 after 5pm.

**AMIGA** A500, 1Mb upgrade, 2nd drive, loads of software, books, Panasonic KXP1081 printer. Reluctant sale, £450 the lot. Tel: Hugh (074) 4937 after 6pm.

**AMSTRAD** CPC6128, mono monitor, datacorder, leads, lightgun, joystick, games, less than 12 months ols, £200. Tel: (0772) 39146 (Preston area) - excellent condition.

**ATARI** 520STFM, 1 meg internal drive, £250 worth of software (inc. STOS), lots of PD. Sell for £250 o.n.o. Phone (0242) 525034 after 5pm.

**ATARI** portfolio with 32K RAM card and Atari Lynx with three games for sale. Best offer secures. Tel: (0580) 714445 ask for John.

**AMIGA** games: Battlechess £10, Blood Money £6, Beast £8, F29 Retaliator £9. All boxed, as new plus more. Phone Dave on Sheffield (0742) 337960.

**SECOND HAND** software for ST old and new titles from £3. Write or phone Robert Scutts, 18 The Plantation, Blackheath, London, SE3 0AB. Tel. 081-852 3575

**ATARI ST USER** June 89 - June 90 £5 (No cover disks). ST World Sept 89, Dec 89 - March 90 - £2. If interested please phone Philip on 0242-251556 between 5pm-8pm.

**SMARTWARE II** Brand new, complete with all manuals, on 5.25" disks best integrated package money can buy. Only £250. Tel. 0323-893294

**AMIGA** half meg upgrade, with clock, mint condition, only £30. Phone Barry 0438-365188 after 6pm.

**FOR** sale: Amiga RAM expansion 512K. No clock. Cost new £40. Sell for only £30 inc. p&p. Write to D Clift, 15 Back, Knowl Road, Mirfield, W. Yorks., WF14 9SA. 0924 494690.

**FOR** sale: Shadow of the Beast one and two incl T-shirts. Cost new £70. Both £35 inc. p&p. D Clift., 15 Back Knowl Road, Mirfield, W. Yorks., WF14 9SA. 0924 494690.

**PHILIPS** colour monitor, SCART and composite inputs. Suitable for ST or Amiga. Bargain at only £120. Contact Norm after 6 pm on 071 2411936. Can you really afford to miss this bargain?

**AMIGA** A500, KS1.3, 2 x joystick, £80 books, over 200 disks, mouse, modulator, manuals, computer £280, or all for £500. Phone Jedburgh 0835 63758. Jon, after 6 pm.

**AMIGA** games, originals, SAE for list. Also many Specky mags. Offers G Power, 6 Renoir Mews, N. Bersted, Bognor Regis, W. Sussex, PO22 9AU.

**SAM** coupe disk drive, brand new, boxed complete with DOS disk £60. and postage. Phone 0384 893220 evenings.

**SPECTRUM** +2 Action Pack, Light Gun, + 6 action games, Free dust cover, 128K, Calculator, B+Basic, and 48K, +10 Mega Games, free 3 £9.99 Games, Only £130.

**Z88** computer, 128K RAM, 128K Eprom, Z-tape and leads, mains adaptor, printer interface, Z88 mags. Boxed as new. Worth around \$400. Sell £275. Horley 820502

**ATARI** 1040 STFM, £300. CM8833 £190. Mono monitor £85. External ST drive £60. LC10 printer £125. Lots of software. Phone Roger on 076 886200.

**APRICOT** F1E, MS DOS, 256K memory, green monitor, single disk drive with software, work processor etc. Phone after 5 pm Swansea 0792 581524

**CBM** 128, C2N tape recorder, B/W TV, action replay VI, £150 of games, magazines, all for £165 ONO tel. 021-3566219

**C64C** with 1541II D/D games incl. Rocket Ranger, Space Rogue and lots more. 8 months old. Phone 061 7751004. Ask for Danny after 6:30 pm.

**GENISON** GS-4500 hand scanner for IBM with OCR and paint software almost new £120 ONO 0903 210152 after 6 pm.

**ATARI** 520 STFM 1 MEG drive £600 of latest software and Superpack, joystick, mouse and mat, mags, coverdisks, dustcover, manual, leads, ex conf £350 ONO. Robert 081 886 2503

**TOSHIBA** T1000SE notebook portable, locoscript pc, mouse, Diconix 150+ portable printer. As new. All leads etc. Ready to run. Phone Cambridge (0223) 247980.

**ATARA** ST. Loads of original games for sale from £2.00 or may swap. Phone (0352) 720603.

**ATARI** ST. GFA draft plus 3.13. Brand new unwanted software cost £149.95. Sell for £80. Tel (021) 422 7579.

**C64** tapedeck, Joystick, 160+ games inc. latest titles, manuals, etc. Excellent condition £125 ono. Tel (0277) 657485 Essex.

**RACE** Maker steering wheel, Joystick boxed barely used £25. Use on all computers. Contact Adam on Hawkey (073 084) 514 within school hours.

**XT** Bridge Board for Amiga 2000 with 5 1/4" drive, disks and books. Never used. £200. Tel (0886) 21599.

**PS** ION XP, Comms Link, Developer, Formatter 32K Rampack, leather case, spread sheet, WP, finance, shaws book. Tel (051) 625 9963.

**CBM** 64, light fantastic pack, brand new unwanted gift £115 ono. Tel Mark (0860) 586513.

**MODEM** Dacom, DSL2123GT, V21/V23 £40. Brother M1109 Printer £60. Serial to parallel conv. £20. Phone (0375) 851706.

**1MB** Ramcard for Apricot XEN 1 £70. Apricot F1 system 720K drive, mono monitor £95. Rev 9 HD controller £40. Tel (03917) 77339.

**SEGA** Megadrive three games, two joypads only £180 or will swap for Amiga A500 no games required. Phone 0268 683250 and ask for Glenn.

**55** World Soccer magazines and 38 computer magazines mainly the Home Computer Course 1983 lot of Spectrum and QL items 41 Springmill Street, Bradford, BD5 7EE.

**MEGA** Drive for sale with four games. Worth £360 sell for £220 or swap for Amiga A500. Contact Stuart on 0223 323212 after 4 pm.

**DOLAN** XT Turbo 102 Keyboard Monitor, 360K and 1.2 MB drives GEM, DRDOZ, All as new £450 ONO inc. delivery. Tel. Sapcote 045527 3053

**100+** disk public domain library (ST) for sale. Offers over £70. Phone Peter on 031 4417952 after 6 pm.

**ACORN** Electron data recorder. Tapes, manuals, PU. Cheap for quick sale. £20 0293 32461

**COMMODORE** Music expansion system for C64. Five octave keyboard FM expander. sound studio and original software. All in original box. £35 (Chester) 0244 851066.

**SEGA** Megadrive, PAL/SCART output. Still boxed, extra joystick, four games inc. Eswat, Forgotten Worlds. Excellent condition, hardly used. £280 ONO. Tel. 091 5181464.

**ST GAMES** including; Kult, Dungeon Master, Chaos Strikes Back, Carrier Command from £2 - £10. SAE to M Norton, Colindale Nurses Home, Colindale Hospital, Colindale, London, NW9.

## AMIGA DIGITIZING SERVICES

Your pictures digitized in any Amiga resolution and returned on a free disk!

Digitizing costs are £1.30 for each colour picture, and £1.00 for B/W

Please make cheques/P.Os payable to A.D.S or telephone **0903-210279** to discuss your individual requirements

**7 Park Crescent, Worthing, West Sussex**

**AMSTRAD** Conise Basic specification £5.50 - RRP £19.99. NCE 43, 47-60, 62-67, 69- 49p each. Amstrad software from 30p. Anthony Brenchley, 25 Glandfield Road, Beckenham, Kent, BR3 3JS. Tel. 081-658 4134

**ARCH 310M** Colour. RISC-OS, 5.25" disk, buffer software, no serious offer refused. Tel. 0903-35107

**COMMODORE PLUS 4** games for sale. Send SAE for list to H Black, 10 Kipplehills Drive, Bucksburn, Aberdeen, AB2 9PQ.

**ATARI** 8-bit software originals as new. Some classics, games and utilities. Phone Graeme for list - evenings only. Tel. 0203-311670 also Peugeot 309 GTi bumper (offers).

**TANDY** 102 portable, new, boxed, £200 ono. Magazines C&VG, PCW, Commodore Computing International and other defunct magazines, mainly commodore based. Offers - Tel. 081-579 1507

**AMSTRAD** 1640 EGA colour display, twin 360K floppies, 32 meg hard disc full of software, dot matrix printer, mouse and books £750 the lot. Phone Chris (0524) 421400 after 6pm.

**AMIGA** 500, 4 months old, including ten games (Space Ace, Populous, Player Manager, etc) and joystick and demos. £250 the lot. Phone Chris (0524) 412400 after 6pm.

**AMSTRAD** PC 1640, EGA colour, dual drives, 32 meg hard card full of software, mouse, etc. Ring (0524) 421400 £750 ono.

**AMIGA** A500 1 meg, 2 drives, separate keyboard/cpu, Music X, Amas Sampler, joystick and games 8 months old worth £1350 sell for £600. No offers. Phone (0403) 66657.

**EPSOM** FX/MX/RX 100 sheet feeder £30. Brother CF300 sheet feeder £30. Sirius 10MB hard disk system £125. Tel (03917) 77339.



**C64** mono, 2 joysticks, over 59 games + 64K memory expansion worth £553, price £350. Phone Nick 081-886 5216. N. London. PS. + modulator.

**AMSTRAD CPC6128** computer, colour monitor, DMP 2000 printer, joystick, Mini Office 2, Brunword word processor, manuals and disks. Hardly used £220. Tel (0256) 781387 after 5pm.

**ATARI 520STFM**. Excellent condition, includes: Contriver mouse, joystick, STOS, games, PD, demos, sound sampler, computer link, issues 1-14 ST Format etc. Offers: David 091-389 1577.

**ENTERPRISE 64**, no offers. Apple IIe system £250 o.n.o. Call for details: Richard (0573) 26032. All computers have leads, manuals, etc.

**464** mono, joystick, 120+ games, costing over £400, 20+ Amstrad magazines, worth over £750, sell for £350. Buyer collects. Phone Jason 081-882 3703.

**MSX HX-10** computer for sale with 52 games, cassette recorder and manuals, worth over £300, will sell for £80 o.n.o. In excellent condition. Simon: (0656) 771716.

**OFFICIAL A500** memory upgrade RRP £150, A501 now selling for £60 no offers. Still boxed as new, call 081-551 3731 after 7pm. Ask for Tak.

**CURRAH** speech £7.50, Comcan £7.00, Trivial Pursuit £7.00, Graphic Adventure, Creator £12, many more inc. Jack the Nipper, from 50p. Wanted Atari bits: (0721) 20863.

**SPECTRUM 128K** + 2 plus loads games, including Leaderboard, Op. Wolf and dozens of others, with two joysticks and manuals, just £90 o.n.o. Phone Sean (0293) 28291 (home).

**AMSTRAD 6128** colour plus second disc drive, manuals, books, progs. £200. Tel (081) 567 3678.

**AMIGA PD** £1.50. SAE Chris Jackman, 3 Albion Terrace, Lexham Road, Litcham, Kings Lynn, Norfolk PE32 2QQ.

**LOADS** of mags for sale! C64, Spec, Amiga, ST, etc. Cheap. Old + very new inc. tapes + discs! Timo, 10 Valentine Way, Chalfont-St-Giles, Bucks HP8 4JB.

**SPECTRUM +2** boxed with manuals, mags, plenty of games including Turrigan, Impossamole, etc. for £90 ono. C Bennett, Hill House, Mead Rd, St Cross Winchester, Hants SO23 9RF.

**AMIGA** Hand Scanner Geniscan, GS4500 as new £120. Phone Ralph (0827) 51738 after 5pm.

**AMIGA** software (originals) Kennedy Approach, Powerdrome, Balance of Power 1990, Falcon Hostages and many more £70. Tel (0842) 765161 after 6 pm.

**SMARTEAM 1200** AT modem Hayes compatible. Auto dial/answer, tone/pulse 300 & 1200BPS boxed. For full details/offer send SAE to MB, L6/G/14 Owens Park, Manchester M14 6HD.

**ABILITY** integrated package WP, database, spreadsheet, graphics and comms. New Xunus ED, yours for £25. Ring Robert on (081) 864 3154.

**AMSTRAD SM2400** modem for sale. 3 months old about 10 H RS used £200. Tel (0709) 555463 and ask for Steve. Call Rotherham after 6pm week days.

**ATARI 520 STFM**, multiface, STOS, 15 games, 18 other disks, 10+ magazines, very good condition £200 ono phone (0963) 62372.



ELECTRONICS

**IF YOU WANT NAKED LADIES CUT THROAT PRICES COWBOYS TRY ELSEWHERE,**

### BUT IF YOU WANT

Good prices, good service and a good product range covering all leading Midi/Music packages, education, art and graphics packages plus business packages please contact us.

### FOOD FOR THOUGHT

DON'T THINK CHEAPEST IS ALWAYS BEST  
DON'T BUY GREY IMPORTS  
DON'T PAY UNTIL YOU'RE SURE  
DO REMEMBER THAT AFTER-SALES SERVICE IS WORTH IT'S WEIGHT IN GOLD

### REPAIRS: NO PROBLEM

WE HAVE OUR OWN SERVICE DEPARTMENT  
Mon-Thurs 11am-9pm Fri-Sat 11am-7pm

**SGM Electronics, 19 Charles Street, Wigan, Lancs WNI 2BP**  
TEL: (0942) 321435 FAX: (0942) 821273

**LOTUS** Symphony version 2, unused unwanted package £125. Tel (092 572) 2533.

**CBM 64** + 1570 drive + 1570 plotter + C2N deck and heaps of software new and old. Only £250 ono. Will consider split. Phone (0296) 82093 - Simon.

**ATARI 400/800/XL/XE** Educational software: learning music (4 disks) £4, pilot programming language (cartridge and 2 cassettes) £8, master typing (cartridge) £3. Tel (0799) 41599.

**ATARI ST** replay 4 sound sampler, cartridge + software £25 to you guvnor. Contact Bryan Kennerley, 21 Graham Drive, Rhyl, Clwyd LL18 3RS.

**SPECTRUM 128K** plus 3 with multiface, 10 disks, 150 games still in box only £200. Tel (0272) 324230.

**ICL DRS 286** work station. 3 1/2 and 5 1/4 high density drives. 1Mbb. 4 OHD. For full details /offer send SAE to; M B L6/G/14, Owens Park, Manchester M14 6HD.

**DIABLO 630** printer, prof. quality daisy wheel, parallel port, suit Amiga, manual. Tel (0977) 661179 (Doncaster).

**SPECTRUM 48K** + 2 microdrives + interfaces, 142 printer Wafa drive multiface speech module modem 100+ games. All for £150. Steve (0858) 462985.

**AMSTRAD PPC 640DD** laptop with case inc. converter to turn TV into CGA monitor. Ring (0742) 583357 after 1900 hrs £250 ono.

**ST software** Metacomco, Revised Basic with 322 page manual. As new, STE compatible, £5.50. Also serious mono contacts wanted. Electronics. Somerville, 56 Leamington Terrace, Edinburgh.

**COMM 64**, light gun, over 55 games, books and manuals, tape into basic part 2 £150 ono. Tel Martin (0252) 874293 after 5pm.

**A+ GRI Lynx** 2 months old with Cal games and Gates of Zendocon £140 ono. Ring Greg on (071) 253 5764 after 4.30 pm.

**TANDY 1000** (IBM compatible) 5 1/4 floppy drive, joysticks, lots of software, 14" colour monitor £250 (will split). D Stirling (051) 677 9786.

**ST Basic** with 322 page manual £5.50. Also serious ST contacts wanted. R Somerville, 56 Leamington Terrace, Edinburgh, EH10 4JL.

**PCW Software Cracker**, 2 prospell dial-up, many more plus games, Cyrus II, Chess, etc. Tel (0242) 230638.

**MODULATOR** for Amstrad CPC range. Connects any CPC to colour TV. Unused £20. Tel (0925) 66591 (evenings).

**STE Simms** to upgrade 520 STE to 1040. 2 sets available £20 each. Tel Jim (0232) 241573 (day) or (0232) 794812 (evenings).

**FOR BBC B Crossware Z80** Cross Assembler System Rom Disc and manual. Boxed as new £20 Worthing (0903) 211559.

**88** back issues of NCE from No 13 onwards. Offer money or something Amiga related. Buyer collects. Phone (04023) 81033 (Essex).

**FOR BBC B Solidisk 32K** sideways Ram with software and manuals. Also light pen with manual. Any reasonable offer. Worthing (0903) 211559.

**DEMON** modem 300/300 1200/75 75/1200 works but requires software for computer only £40 0353 723313.

## ISLAND DIGITAL

### MIDI MUSIC SPECIALISTS

MUSIC HARDWARE	MUSIC SOFTWARE
Cheetah Stereo 16bit sampler.....£750	Music X version 1 (Amiga).....£50
" MS6 Synthesizer Module.....£275	Vertuoso (ST).....£50
" Master 5V keyboard.....£275	Texture (IBM).....£75
" MD16 16Bit	Voietra SP3 IBM.....£295
Digital drum Machine...£275	
COMPUTER HARDWARE	
Available if purchased with any of the Music Hardware.	
Amiga Flight of Fantasy.....£345	Atari ST Discovery Pack.....£265
Atari STE Power Pack.....£345	IDS IBM Compatible PC.....£350

**FOR FURTHER INFORMATION ON MUSIC SOFTWARE OR HARDWARE RING OUR MAIL ORDER HOTLINE 0705-464704**

**COMPUTER** and electronics mags for sale, all types, good condition. Send SAE to J M Peters, 299 Southway Drive, Southway, Plymouth, Devon PL6 6QW.

**NEW** Computer Express issues 1 to 52. Offers (0925) 860179 (Warrington) after 6pm.

**EPSOM** LQ1050 24 pin letter quality. Average selling price £580 plus VAT = £667. For sale only £500. As new, with box and manuals (0291) 424526.

**SOFTWARE** for sale. 115 games for 48K Spectrum £65. 15 games for Commodore 64 £10. All original cassettes. Tel (0902) 373638.

**AMIGA 500** + stereo system, over 60 disks, box, Kick off 2, Turrigan, Beast 2, dust cover, mouse, joysticks, leads, sell £500. Offers considered, will split (0254) 53195.

**PRINTER** - wide carriage, very good condition. Epson compatible £150. Tel. 0784-482422 (Staines).

**MASTER 512K** co-pro with twin drives and amber monitor, music 5000 synthesizer plus books and software. Offers contact: Miles, Alwyn Cottage, Highfield Road, Bream, Glos.

**AMIGA B2000** brand new, 20Mb PC/Amiga hard drive, PC/XT bridgeboard, 5.25" drive, boxed with manuals, installation disks etc. £850 ono. Tel. 0243-774767 after 6pm.

**COMMODORE 64** with disk drive, a few disks, two tape decks, £500 worth of games, joystick and Music Maker £350. Tel. 0993-779936

**AMIGA A500** with external drive, joysticks etc., loads of software 200+ games, all the latest stuff. £300 no offers. Tel. 0202-479080 after 6pm.

**SPECTRUM 48K** + with two joysticks, 120+ games and other software/hardware, Only £100 - all offers considered. Tel. 0836-380187

**QL** for sale. 128K, microdrive cartridges £50 ono. Tel. 0836-380187

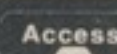
Everything's a bargain

## TMJ COMPUTER SOFTWARE

Archimedes - IBM - PC - Atari ST - Amiga 500

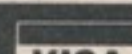
software offered at 10-20% off R.R.P

Interdictor	R.R.P £34.95 OUR PRICE £29.95
Pipedream	R.R.P £113.95 OUR PRICE £99.99
Action Fighter	R.R.P £24.95 OUR PRICE £20.95
Paper Boy	R.R.P £19.95 OUR PRICE £16.95



Please send SAE for Price List to:  
**TMJ Computer Software**

39 Farmstead Road, Corby, Northants, NN18 0LE.  
Telephone 0536 69011 Enquiries Welcome  
Electronic BB Darkhaven 0604 413716  
All prices quoted are inclusive of VAT and Postage





**PRINTER**, 18 pin, Taxan Kaga KP810, Epson compatible. Good condition £50 ono. Phone Kings Langley (Watford/Hemel) (0923) 265539.

**PC** software, Space Rogue, Fantavision, Home Accounts. All new and unregistered £50 or will split. Tel (0977) 675601 after 5pm.

**ATARI 1040 SM124** Loads of software £375 ono. plus brand new SM124 £75 and clock card £18. Tel. 0902-772141 ask for Pete.

**ST GAMES** for sale, £6 - £10. Crack Down, Strider, Switch Blade, Rick Dangerous, Falcon, Populus, Xenon II, Speed Ball, Silkworm, Dragon's Breath, + 20 others. Phone Al after 6pm on 0420-87856

**AMIGA A500** half meg upgrade, monitor. Mint condition £450 ono. or swap for Atari 1040 monitor. Tel. 081-546 5355

**A500**, monitor, 1Mb, printer, modem, external drive, loads software will sell or part exchange for a PC. Anything considered, phone Dave evenings after 6pm on 0761-52450

**DATAEASE 4** - bought this year, manuals, tutorials etc. Aducaction version database for PC £150. Also Psion organiser model CM, manual £55. Tel. 021-777 8808

**MACINTOSH SOFTWARE** unused! Trapeze £130, Read Set Go V.4 £250, Image Studio £250, IBM PC: PageMaker £250. All new! Contact Derek on 081-677 4727.

**SPECTRUM+3** software for sale. CP/M, Masterfile, utilities and more. All originals with manuals. Various prices. Tel. 0472-887216 for details.

**SPECTRUM+2** for sale £100. 3 joysticks, plenty of games, Monopoly, Man Utd, Italia 90 and more. For details ring Debbie on 061-737 3467 between 9am and 4pm.

**COMPLETE SPECTRUM** bulletin board system ( includes Micron software, manual, auto answer modem, interface one, 7 microdrives and microdrive cartridges) £100. Phone Stuart on 051-546 4640

**INTERNAL DISK DRIVE** DS/SS for BBC/PC £30 also DS/DD faulty £15. Microdrive carts £2 each. Remote control joystick for 48K Spectrum £12. Tel. 0642-598935

**C64C** C2N, Oceanic disk drive, sound expander and cartridge, loads of games and utilities on cassette and disk. All boxed as new £200 no offers. Tel. Manchester 773-6455

**VICTOR** Sirius system complete, twin floppies, monitor, keyboard 20 MB hard disk. No software hence £155. Ron Hollingshead, Torquay, 0803 612942

**PRINTER** Amstrad DMP 2160. slight fault, print head OK. Useable, easily repaired. £40 ONO., Write: G Porter, Eliot, Ashworth Hospital, Mighull, Mersyside, L31 1HW

**PC** engine for sale. Plus four games (Pal PC engine) boxed, very good condition. Sell for £160 o.n.o. Phone (0898) 278335. Ask for Steve (evenings).

**ATARI 520STFM**, 1 megabyte memory, 1 megabyte internal drive, £700 of original software (STOS, Castle Master, etc.), loads of P.D. & accessories, £350. Chris: 021-550 6489 for information sheet.

**BARGAIN** or what. Amstrad CPC464 Colour monitor, three joysticks, loads of games, Robocop, Chase HQ, Turbo out run and more. Must sell. Phone ABIGA A500 internal memory upgrades for sale. All new with switches and clocks. Low low prices 1.5 MB, \$125 up to 9 MB. Call 0742 686977 now (ICE).

**AMSTRAD** 6128 with colour monitor, numerous disks and tape games and utilities books and mags. Tel. 0253 56735 after 6 pm £250.

**AMOS** game creator with new extras disk £30. Amiga Action Replay cartridge, boxed, new, unwanted gift £40. Tel: Julian on (0742) 438542.

**MODEM**, British Telecom Merlin, v.29, 9600, 7200, 4800, 2400 baud rate. Full Duplex 4 port multi-plexor, new and boxed with manual, only £150 o.n.o. Phone 081-866 7152.

**PRINTERS:** MT91 laser quality inkjet and accessories, worth £1100. Sell or p/x 24 pin. Also MT81 DMP Epson compatible with Maxafit £100. Call (0332) 3367642.

**ATARI** 1040 STE 2 meg Ram SCI 224 colour monitor 50 meg hard drive LC10 colour PRI inter second floppy and software offers - Colin (081) 751 5298.

**CPC 464** almost unused bargain £80. Buyer collects or pays carriage (Milton Keynes). Chris (0332) 249855 (work).

**C64** software disk and tape all in new condition. Must sell many simulators and strategy. Tel (0543) 424102 after 6pm.

**SEGA** Master System, games, joystick, control, PAB, vgc. £100. Tel (0745) 337100 ask for Andy.

## JTS PD

**NOW ONLY £1.50 PER DISK!**  
**HERE IS A SMALL SAMPLE OF OUR SOFTWARE:**

- |  |     |
|--|-----|
| Alcatraz Megademo 4: Superb effects and music in the best MegaDemo so far!                     | (3) |
| Fractal Flight Demo: Fly through Fractal scenery with this great disk                          | (1) |
| Best Demos of 1990: Rebels COMA demo, Red Sector CeBit '90 and more.                           | (1) |
| Fraxion Horror Video: Your worst nightmares come true on your Amiga                            | (1) |
| It's Obscene 5: Listen to these very abusive phone calls, have a chuckle!                      | (2) |
| Digital Concert 5: The newest and best digi-music from Flash Production.                       | (1) |
| Club Mix 2: Brilliant house music in one long mix from the Beatmaster.                         | (1) |
| D-Mob Music 4: The tradition of great music continues from this cool group                     | (2) |
| Utils Disk 66: This disk contains 202 utilities, compiled by Pendle Europa!                    | (1) |
| All New Star Trek Game: Very good playability, and it's a challenge...                         | (2) |
| Home Business Pack: Spreadsheet, wordprocessor & database, with help files.                    | (3) |
| JTS Soundtracker Set: Various versions of Soundtracker, plus 4 instruments disks. Great value! | (5) |

**OR WHY NOT BUY 10 OR MORE PD DISKS FOR £1.25 EACH!**  
SEND A BLANK DISK OR SAE FOR OUR FREE CATALOGUE

To order: Please make cheques or postal orders payable to JTS PD and then send your order to:

**2 ASHFIELD, WETHERBY, LS22 4TF.**  
**TELEPHONE: 0937 63834**

## WORKBENCH P.D AMIGA P.D SHAREWARE ONLY 99p

**A SMALL SELECTION - SEND 1 x 22p STAMP FOR FULL LIST**

MUSIC	DEMO'S	UTILITIES
M24 Now Music 14	D2 Wild Copper Mega Demo	U11 Nasa Backup Disc
M10 House Acid Music	D11 Hard Meg Demos	U3 Ghost Writer V1.2
M24 Kylie's Locomotion	D32 Popeye Meet's	U6 Game Music Creator
M20 Magnetic Fields	Beachboys.	U8 Dave's Creator Disc
	D14 Nasa Slideshow	

**CARRIAGE UP TO 10 DISCS £1.15**

**HARDWARE & SOFTWARE ALSO STOCKED**  
**ALL PRICES INCLUDE VAT.**

All sales are subject to our Trade Terms of Trading.

**WORKBENCH P.D 1 RUCCLEUCH STREET, BARROW-IN-FURNESS, CUMBRIA, LA14 1SR**  
**TEL: 0229-870000 (6 lines) Hours: Mon-Fri 10.00am - 5.00pm**

**BOOKS** for many micros, also chess books for sale. Jones, 2 Town Mead, Oakford, Devon, EX16 9EW. Also got lots software for Spectrum and CPC.

**SPECTRUM** 128+2 with VTX5000 modem, joystick, Kempston and Sinclair interfaces. Over £400 worth of software. Complete with manuals. VGC £175 ONO. Phone Win 0962 881426

**BBC 'B'** colour monitor, disc drives, software, books worth £750. Sell £250 ONO. Phone 051 547 3747

**TAITO** Space Invaders Arcade Machine - the Classic Machine that started it all! Excellent condition, buyer collects. £150. 061 6531552 (North Manchester)

**ST GAMES** Thunderbirds £9, Custodian £8, Orbiter £10, Spitfire 40 £9, Strikeforce Harrier £9, Tai-Pan £6, Exolon £7, Championship Waterskiing £6, The Running Man £10. Tel. 0705-462140

**TATUNG** Einstein, twin drives, 80-col card, BBC Basic, Logo, wordprocessor spreadsheet, database, C-compiler 280 assembler games, books, PD, software, approx. 40 3" disks £75 0353 723513

**AMIGA** A590 hard drive 20 MEG plus 1 MEG RAM, Quarterback software and hard drive system discs £350.

**MAGAZINES** for sale, send S.A.E. HP718 hand held competer £100. Centronics GLP 1 9 pin printer £55. Contact Stephen Neal, Meon Ley, Upper Quinton, Stratford-on-Avon, Warwickshire.

**ZX** Spectrum +2, with £400 software, books, joysticks, plus Citizen 120D printer with parallel interface £180. 4 Hadrians Close, Salendine Nook, Huddersfield. Write to confirm.

**AMIGA** originals. Phobia, voyager, Chess 200, Castel Master Plus Crypt, Archipelagos, Nebulus, Commando, Paper Boy, Pipemania, Mind fighter, Italia 90. Most unused. £50. 0224 824904.

**WOW.** This is a bargain. Amstrad CPC 464 colour monitor, three joysticks, Robocop, Chase HQ, Turbo Out Run plus more. Must sell. Brill deal. Phone Tom. 0793 740028.

**ARDHIMEDES** 410/1 upgraded to full 440/1 specification plus Taxan 770 monitor, interdictor and solditools (3D CAD). 9 months old. £11500. Mortgage forces sale. 0273 698560 evenings.

**ATARI** 520 STE, stereo sound, 4096 colours, joystick, 26 games, power basic magazines, £300. Tel Southend (0702) 615886.

**IRISH** readers. Datatronics discovery 2400 Baud modem only £200. Internal modem only £140. Excellent make. External type suits Amiga and PC. Tel: Alan (0404) 67724.

**ELECTRON** Plus 1 interface with view cartridge, cartridge game, loads of cassette games including Elite, manual, books, magazines, some with cassettes. Yours for £90. Good condition. Tel (0235) 814806.

**AMIGA** A501 1/2 meg expansion + 3 1/2" disk drive plus 6 original games. £100 exc postage. Will split., eg. DD £40, Exp £40. Games £30. Exp + DD £65. Phone (0722) 790776 after 6pm.

**AMSTRAD** Disk, originals and cruiser, joystick. All excellent condition £50 ono. Tel (0202) 397920 ask for Tim after 4pm not Monday or Tuesday.

**CASIO** full size midi keyboard ,220 voices, 1000 variant backing tracks. I can deliver £210. Tel (0904) 636371 York.

**SPECTRE** GCR - Mac Emulator with manual updates turns your Atari into a Mac-Plus. £300. Call Les on 051-733 0369 after 6pm.

**ATARI** 520 STFM with 1 Meg external drive. Still under guarantee. Lots of games with leads, etc. £200. Tel (071) 474 9760.

**SPECTRUM** 48K plus monitor cassette player 100's of games soundbox, loads of mags and books £90 ono. ST Syncro Express £15. Call ev. (0954) 30528.

**SAM** Coupe, 512K, Int. 3 1/2" disk drive, latest Rom + Dos, leads and manuals, boxed, Ser/printer I/F, sell for £100. Tel: Dave (0285) 860342.

**FAULTY** ZX8116K Rampak gives odd graphic display, maybe able to repair. Also Oric 1 games as new £15 for ZX81 Rampak £6 for Oric 1 games. Tel (0246) 207765 anytime.

**AMIGA** PD as low as 50p! Send for list to Jazz, 74 Beams Way, Billericay, Essex CM11 2NR.

**CBM** 64, disk drive, printer, lots of software - tape and disk - extra add ons. All of it only £400. Phone (0442) 62554 after 6pm. Ask 4 Paul.

**MEMORY** upgrade chips (18) £15. Stands £5 each. Dr Halo £10. PC Dogs £10. Supercalc3 £10. Dynodex (Filofax type) for Apple £50. Tel (081) 542 2071.

**BBC** Model B, dual disk drives, Z80 2nd processor, monitor, SWR, DFDC, Roms, manuals, books, software £350. Phone (031) 6694096.

**CBM64**, 1541, C2N datassette AR cartridge plus many games only £175. Phone (081) 643 4949 after 6pm.

**AMSTRAD** CPC464 good condition, 30 games, light pen, colour monitor, joystick £180. Call Darren (081) 679 8258 after 7pm. Not Mondays or Tuesdays.

**CBM** 64, hundreds of games, tape recorder, power cartridge, joystick, mags. £150. Phone Joe on (0354) 54877 after 6pm.

**ATARI** ST , games, Run the Gauntlet, Western games, Draggon Ninja £8.00 each. CBM 64 Championship Wrestling, Gauntlet, disk £5 each. Mr Sibley, 65 Granby Close, Weymouth, Dorset. DT4 OSR.





## Amiga P.D. Software

**1-5 disks at £1.50 each**

**6-10 disks at £1.00 each**

£5.00 membership per year - which includes free Fanzine, free PD disks and 4 updates per year and 10% discount on all PD software. Predator demo available on Amiga. Digi demo available on the ST. 1 meg only - full of digital sound + music - SPECIAL PRICE £1.00 each.

**ST/Amiga Fanzine £1.20 + 20p P&P**

ISSUE 8 with FREE Disk FREE P.D. List

**Sound Sampling for the ST/Amiga**

£2.50 per disk (10 samples)

**Picture Digitizing for the Amiga**

£4.50 per disk (6 pictures)

**For details contact us at:-**

**Sector 16 160 Hollow Way Cowley Oxford**

**Tel: 0865 777146/774472**

Please make Cheques / P.O.'s payable to ANDREW HAMILTON and SIMON GLEED

**AMSTRAD** CPC green monitor, four joysticks, games, one year old worth £800 sell for £420 ono. Ask for Paul or Peter on (0384) 235430.

**PCW** 8256/8512 Master Scan and Master Paint, Print Head, Scanner and Graphics software as new £45. Tel (0672) 810157.

**AMSTRAD** PCW 8512, DTP, mini-office, scrabble, lots of books, mags, discs and ribbons £350 ono. Tel (0296) 436172 (Aylesbury).

**AMIGA** A590 hard drive, £250, 1084 monitor £120, A500 1.3, 5 months old, 1MB, £200 of software, £350. Call (0224) 824904.

**OVER** 40 quality Amiga games for sale. All originals. Total value £1000. Will sell whole lot for just £400 ono. Contact Anthony (0703) 440084 anytime.

**CPC** Disk software PAS, Cal MT + £15 Pocket Protext £10 Devpac2 £15 Firmware Soft 968 £10. Tel (051) 489 0500.

**STE** Computer. Seven months old with extras £330. Can deliver Scotland. Tel (0250) 5108.

**FOR** sale 520 STFM 1 meg drive, 2 joysticks, mouse, over 30 top titles worth over £500, also Master Sound package. Sell for £349. Phone Prestbury 829410.

**FOR** sale Amstrad PCW 8256 Sage Modem V21, V23, cables, docs, etc., minus software but ridiculously cheap, only £70 ono. Ring Simon (0904) 625016.

**AMIGA** games: Altered Beast £12, Op. Thunderbolt £12, Chase HQ £12, plus many more for full list phone (0243) 773220.

**Compaq III 286 Portable,**  
20 Mb HD  
3 1/2 inch 1.44 Mb  
5 1/4 inch 1.2 Mb  
Expansion Unit  
16 bit memory/modem interface board  
Micro Soft Mouse  
DOS 3.3 or 4.01+Shells  
RUNNING: Ventura, Excel, Windows 3  
Free Lance, Dataease 4, WP 5.1, WORD 5  
Turbo Pascal, Turbo C, Norton  
Epson FX-400 9 pin  
Extra Printer ribbons, and 9 Boxes of disks  
Many more programs on backup disks  
Selling For **£1550.00** (4 Months Old)  
**Tel: 021-557-7300 ask for JOE**

**CASIO** FP-40 printer/cassette/interface for Casio Pocket Computers. 40/80 colum. Dot Matrix. Excellent condition £40 ono. Tel (021) 358 6688.

**MICRO** Vitec RGB colour monitor. Designed for use with BBC Micro, teletext or similar systems. Excellent condition £150 ono. Tel (021) 358 6688.

**ATARI** 520 STE, 1meg memory £100 of software, all boxed and as new £299 or swap Amiga. Tel (0630) 58329.

**EPSON** LQ1000 24 pin printer, slight fault, hence only £100. Also Ringdale Par/Ser Megabuffer (256K) £70. Phone Steve (0245) 329443 evenings.

**SCI** Sys. Turbo - Kasparov 432 chess, computer scruffy but strong £25. A Jones, 2 Town Mead, Oakford, Devon EX16 9EW or call (03985) 438.

**C64** games, some on disk, all mint condition. Ring now for list and prices. Amstrad printer also for sale £90. (0543) 424102 after 7pm. Tal

**LOOK** - Zenith PC + NEC Spinwriter and Mannesmann MT86. Updating system, need space. Offers! Del. poss. for some areas. Tel. Dave on (0734) 871054.

**TURN** your Acornmaster 128 into an IBM compatible 512 board with Dos, Gem and mouse £120 ono. Tel. (061) 486 9457 as new.

**COPPER** circuit board single sided, new 16" x 4" x 1/16" thick £40 for 100. Phone (0744) 27067 Lancs.

**COMMODORE** 64, datasette, blank tapes, two backup cartridges, 74 original games, books, manual, desk and joystick. Worth £750+. For sale £150 ono. Nik (0582) 596025.

**HOME BREW** software for the CPC's. Games, utilities, educational programs - cheap and disk or tape write to: A Sill, 19 Sherwood Drive, Skellow, Doncaster, South Yorkshire.

**CBM** 64 games, Silkworm, Comb at Lynx, Combat School £2.00 each. Cruiser joystick £4.00. Mr Sibley, 65 Granby Close, Weymouth, Dorset DT4 OSR.

**AMSTRAD** 8256 PCW with printer, locoscript etc. £275. Phone (0744) 27067 Lancs.

**FULL** programming development system (consists of Amstrad PC, PDS card, Commodore 64 and disk drive). Phone Craig on (0472) 840271 after 6 pm if interested!

**ATARI** 1040 STFM, £290 ono, PC, speed STE, just £170! ST 512K Ram upgrade chips £30. Ring (061) 881 5663.

**HEWLETT** Packard Colour Paintjet Printer £600. Pagesetter 2 £50. Digipaint3 £40. Mastersound Digitizer £20. Digiview Gold 4.0 £80. Call (0203) 316420 and ask for Kelvin. NO TIME WASTERIS!!

**LYNX** + three games + power adaptor + comlynx cable £130. Still has 4 months warranty. Phone (041) 639 1567.

## Miscellaneous

**AMIGA** power supply, Commocore brand, full working condition £25 including p&p. Phone Barry 0438-365188 after 6pm.

**ATARI** 520ST 1Mb drive, mouse, software, manuals. Unused £280 ono. Tel. 0767-680253 evenings.

**EUROMAX** Racemaker joystick (yoke) £15 or swap for other Amiga items. Tel. 0473-713715 between 6-9pm. Hi Centronics (wrench) (viper).

**AMIGA ACTION REPLAY** cartridge, new, boxed, £45. Freezes monitor etc. First cheque gets cartridge, late ones returned. Send to J S Smith, 45 Maplecroft Crescent, Sheffield, S9 1DN.

**COMMODORE** 8023P printer with manual. £135 ono. Tel. 021-358 5418 after 6.30pm weekdays.

**ATARI** 8-bit software originals as new. Some classics, games and utilities. Phone Graeme for list - evenings only. Tel. 0203-311670 also Peugeot 309 GTi bumper (offers).

**TANDY** 102 portable, new, boxed, £200 ono. Magazines C&VG, PCW, Commodore Computing International and other defunct magazines, mainly commodore based. Offers - Tel. 081-579 1507

**ST GAMES** Thunderbirds £9, Custodian £8, Orbiter £10, Spitfire 40 £9, Strikeforce Harrier £9, Tai-Pan £6, Exolon £7, Championship Waterskiing £6, The Running Man £10. Tel. 0705-462140

**SHARP IQ7000** with language translator and thesaurus/dictionary cards £150. Tel. Steve on 0892-662698 evenings only.

**BARGAIN OFFER** Atari 8-bit 65XE. Some games, cartridge tapedeck, joystick - take it off me for £70. Bob, 43 Kingsway, Newcastle, Tyne & Wear, NE4 9UJ. First reply C.O.D.

**NEW AMIGA MOUSE** for sale only £15. Also Amiga modulator only £10. Phone 061-338 5566 after 4pm and ask for Richard.

**ATARI 520STFM** with 2Mb double-sided drive. Mint condition with boxes. Sell for £220 ono. Phone Paul on 0272-652754 after 5.30pm. Quick sale needed. Phone Now!

**PC ENGINE** (PAL version) with 2 cartridges in mint condition - sell for £160 ono. Phone Paul on 0272-652754 after 5.30pm. Quick sale needed. Phone Now!

**PC ENGINE** with latest PAL x2 adaptor plus three games for £95 incl. p&p. Phone 0222-487794. Ahmed, 32 Boverton Street, Roath, Cardiff, S Wales, CF2 5ES any time. Hurry!

**MASTER 512K** co-pro with twin drives and amber monitor, music 5000 synthesizer plus books and software. Offers contact: Miles, Alwyn Cottage, Highfield Road, Bream, Glos.

**AMIGA B2000** brand new, 20Mb PC/Amiga hard drive, PC/XT bridgeboard, 5.25" drive, boxed with manuals, installation disks etc. £850 ono. Tel. 0243-774767 after 6pm.

**SHARP IQ7000** with language translator and thesaurus/dictionary cards £150. Tel. Steve on 0892-662698 evenings only.

**SPECTRUM+** complete with joystick £30. Alphacom printer c/w 10 roots £55. Microdrive expansion kit c/w two microdrives £55. 30 microdrive cartridges £50 or all for £170. Tel. 0983-402273

**PC ENGINE** (PAL version) with 2 cartridges in mint condition - sell for £160 ono. Phone Paul on 0272-652754 after 5.30pm. Quick sale needed. Phone Now!

**AMSTRAD** CPC464. Loads of games, joystick £150. also Sega video games system, three games, 9 months old £120. Tel. Simon (Stoke-on-Trent) 261564.

**MSX-2** Philips NMS8245 - complete system. CM8833 monitor, 37 games on disk/cart, mouse, DSDD, MSX printer, datacarder, communications and business packages - £550. Phone for details on 0642-564932

**MSX** Toshiba HX10, HX-564, Wordpro, Computermates, 'MSX text/cards', cart games including 1942, Nemesis 3. Carts, programming books/mags, joysticks, datacarder £100. Phone for details on 0642-564932

**TRADE BINATONE** midi hi-fi with CD player and compact disc for Atari STFM or STE or Amiga. Cost £300 - contact Lee on 0226-758256

**OLIVETTI PR15 PRINTER** for sale £75 ono. If your interested call Andrew on Preston 0772-314947 anytime.

**ARCH 310M** Colour. RISC-OS, 5.25" disk, buffer software, no serious offer refused. Tel. 0903-35107

**COMMODORE PLUS 4** games for sale. Send SAE for list to H Black, 10 Kipplehills Drive, Bucksburn, Aberdeen, AB2 9PQ.

**SPECTRUM+3** software for sale. CP/M, Masterfile, utilities and more. All originals with manuals. Various prices. Tel. 0472-887216 for details.

**SINCLAIR 128K +2** joystick, keyboard £50. Light pen + programs and manuals £2, Games ranging from 25p - £1 and magazines 10p each. Perfect condition. Contact Gregory at home on 081-348 3134

**SEGA GAMES SYSTEM** with 3 games. Hardly used £30 ono. Also Apple IIe, monitor and disk drive - any offers. 0249-814547

**AMSTRAD 6128** colour plus printer, software and books, genuine bargain must sell £350 ono. Tel. 0328-46915



**SPECTRUM+** complete with joystick £30. Alphacom printer c/w 10 roots £55. Microdrive expansion kit c/w two microdrives £55. 30 microdrive cartridges £50 or all for £170. Tel. 0983-402273

**BARGAIN OFFER** Atari 8-bit 65XE. Some games, cartridge tape deck, joystick - take it off me for £70. Bob, 43 Kingsway, Newcastle, Tyne & Wear, NE4 9UJ. First reply C.O.D.

**NEW AMIGA MOUSE** for sale only £15. Also Amiga modulator only £10. Phone 061-338 5566 after 4pm and ask for Richard.

**ATARI 520STFM** with 2Mb double-sided drive. Mint condition with boxes. Sell for £220 ono. Phone Paul on 0272-652754 after 5.30pm. Quick sale needed. Phone Now!

**PC Engine (PAL)** with six games including New Zealand Story. Excellent condition and 12 months warranty £185 o.n.o. or swap for megadrive. Tel: (0533) 739174 after 5pm.

**AMIGA** software for sale: all originals - Batman, Nebulus, Rampage, Roger Rabbit, StarRary, A.P.B., S.E.U.C.K., £40.00 o.n.o. Will split, write to: Simon, 68 Richmond Road, Cardiff.

**WANTED** ST desktop publishing package like Fleet Street or Desktop or Pagestream. Will swap 13 top games. Tel Paul (0733) 78240.

**LATEST** Amiga stuff, also I wish to speak to Jester of Quartex. Send stuff to Bob Hay, 21 Loser Road, Milton Keynes FR1 2SJ or tel 618324.

## **Magnetic Media**

### **AMIGA PUBLIC DOMAIN**

#### **BLANK DISKS FROM 37p EACH INC VAT**

**PD:- £1.80 each or £16.50/10 inc VAT**

#### **A small selection from our vast range**

359/360 Star Trek 3	1 Meg
443 Coma Demo	1 Meg
444 Dope Intromaker	0.5 Meg
445 Magnetic Fields Music	0.5 Meg
453 Cryptic UK Demo Comp	0.5 Meg
459 Time Circle Demo	0.5 Meg

**SPECIAL OFFER! ALL 7 DISCS - £11.50**

**VICTORIA ARCADE,**  
**ALDERGATE, TAMWORTH, STAFFS**  
**S79 7DL TEL: 0827 59566**

Postage Inc.

**SEGA MASTER** system + light gun, 5 games incl.; Shinobi, Thunderblade etc. VGC and boxed £70 no offers. Tel. Michael on 07742-365243 after 6pm.

**SPECTRUMS** for sale, plus hardware, software, books for various micros. SAE to Mr Jones, 2 Town Mead, Oakford, Devon, EX16 9EW.

**AMSTRAD CPC464** with colour monitor, disk drive, speech synthesizer software, all manuals and magazines £400 ono. Tel. John on 0383-737474

**WANTER** VICTOR Vicki PC with software and manuals. Good condition only. Reasonable price paid. Also extra software wanted. 051 605 0410.

**ST DECISION** in the Desert by Microprose wanted. Will pay up to £15. Phone 051 645 2997 after 4 pm. Ask for William.

**WANTED**, BBC Master. Will buy or exchange for top class metal detector with extras, cost £500. Tel (0246) 826766.

**HELP** needed to match Tandy TRS80II printer to Amstrad 1640. Call Torquay (0803) 214413 evenings or write to Flat 3, Lucerne, Lower Warberry Road, Torquay.

**WANTED** Atarilynx or Gameboy type portable game machines with extra games if poss. Please tel. (0619) 626377.

**GAMEBOY** cartridges wanted. Will swap or buy. Also cheat sheet for sale - over 60 Amiga or ST cheats. Send £1 to P Hickey, 3 Churchill, Edinburgh.

## **AMIGA - ATARI ST - C64 - PC**

# **Pd Essentials**

**22 Fern Avenue, Mitcham, Surrey, CR4 1LS**

We have the most comprehensive pd library in the U.K. You too can become a member by simply sending a cheque or postal order for £1.00 (refunded on first order) and we'll send our full list of software.

Compile your own disk, choosing the programs you want, (max 500k) using our easy to read catalogue which states the amount each program takes up on the disk. All disks are £2.50 + 50p P+P and 100% error free guaranteed.

(order over 5 disks and we'll pay the postage!)

**WANTED** V22bis modem for ST auto answer and dial pref. Tel (0383) 822930 after 6 pm, ask for Steven.

**PRINTER** head for Okimate 20 printer. G Power, 6 Renoir Mews, N. Bersted, Bognor Regis, W. Sussex PO22 9AU.

**WANTED** C64 Easy Spell. Newsroom. Clip Art. Print Shop. Please write to Paul, 42 Chesterfield Road, Worthing, BN12 6DD. Disks only please.

**PC** Software, any vga 3 1/2" games, DTP, Protext, Super Mailshot plus etc. Also Ad Lib, Soundboard wanted and internal modem. Must be reasonable (0782) 324799.

**WANTED** Pools Prediction Program for ST. Ring Dave (061) 442 6887. Electronic components also required.

**AMIGA** IFF sounds- send me a disk full - I'll send a disk full back! James Meehan, Pier House, Strand on the Green, London, W4 3NN

**USERS** handbook for Commodore 64 Easyscript ESC 6440. R Clarke, 10 Saxon Court, Bull Lane, Maldon, Essex, CM9 7HS. Tel. 0621 859499

**WANTED** Metawindow for C and any C graphic library for Turbo C. Contact Gary, Tel. 071 2728436

**GRANDAD** bought Amiga 500 but discovered lack of educational programmes for children to 16+. Anyone got a BBC emulator and programs urgent please write. Mr G Sutcliffe, 22 Towers Ave., Deane, Bolton, Lancs., BL3 4JN

## **"CHIP SHOP" LTD**

### **HAVE MOVED TO:-**

**Unit 5, Royal Oak Trading Estate,**  
**Cooper Street**  
**off Higher Hill Gate,**  
**Stockport**  
**Cheshire SK1 3QJ**

**Tel (061) 476 3070**

**Fax (061) 476 3114**

**VISA**



**ATARI** "ST Adventure Creator" software plus manuals wanted. Swap for original software. Also looking for PD source code for the "Adventure Game Toolkit" games. Tel: (021) 422 7579.

**MX80TP** manual or photocopy needed. Ring (0256) 29994 ask for Tony.

**WANTED** please. Panasonic KX-P1081 operating manual for this popular printer. Phone Bognor (0243) 867565.

**WANTED** mouse for Amstrad PCW8000 series. Cash waiting up to £20. Phone (061) 799 1813.

**FLEX1** - Dump plus for Atari ST and Star LC10 (colour), and Vidi ST must be working and cheap. (0705) 453985.

**READ** NEWTYPE T.M.P. magazine? I love it! Chris Hackman, 3 Albion Terrace, Lexham Road, Litcham, Kings Lynn, Norfolk, PE32 2

**STAR LC-10** colour printer with ribbons - only £135. Also Amiga games from £4 each. Tel. 081-558 5698.

**ATARI 520STE** with Philips CM8833 monitor plus lots of software and covers. Five months old. £499 only. Tel. 021-453 1344.

**ATARI 520STFM** with external drive, mouse and Metacomco ST Basic £220. Tel. Gary on 0293-34415 after 6pm.

**AMSTRAD CPC** disk games for sale £5 each. Also Ace mags, issues 8 - 33 + 10 assorted mags £3 the lot. Tel. 0529-305402.

**SPECTRUM +2** including complete art package, many games - all original. Selling because of upgrade. Tel. 0364-529290 ext. 210.

**MUSIC-X** or DRT's user manuals wanted swap for IFF samples or pay cash plus general music x-chanve inc. tips etc. Ring 0742 6869977 (ICE) now.

**RIVERDENE PDL**

**30a School Road, Tilehurst,**  
**Reading, Berkshire RG3 5AN.**

**Telephone: (0734) 452416 Fax: (0734) 451239**

---

**ATARI ST & AMIGA**

**PUBLIC DOMAIN SOFTWARE**

<b>1st Class Service</b>	<b>1st Class Postage</b>
<b>1st Class Disks</b>	<b>1st Class Selection</b>
<b>1st Class User Group</b>	<b>1st Class Help</b>

**FIRST CLASS LIBRARY**

**FREE PD CATALOGUE ON DISK**  
(please state Atari ST or Amiga)  
When you send a blank disk and SAE to RIVERDENE PDL  
ACCESS & VISA welcome





# 20% OFF RRP

## PC SOFTWARE

Windows 3.0 .....	£79.00
Wordperfect 5.1 .....	£340.00
MS Works 2.0 .....	£116.00
Word for Windows .....	£356.00
Autoroute Plus .....	£239.00
dBase IV .....	£476.00

Many more titles available at discounted prices. We can get virtually any software package discounted so please ask for details. SAE gets full price list.

### BIGGER DISCOUNTS FOR BULK ORDERS

Please add £2.50 p+p per order plus 15% VAT

**PTA Software, 6b Brockley Cross, London SE4 1BE Tel: 081-692-2994**

**80** Column card for the Einstein wanted. Any back no's or Einstein Monthly mag also wanted. G Constable, 77 Barnwell St, Kettering, Northants, NN16 0JD

**C64** "Magic Micro Mission" cassette (Quicksilver) please. Generous price offered for original in good condition. Call Simon on 021 4227970

**WANTED** cheap hard drive for Amiga cash waiting. Up to £250 for best offer. Phone 0695 423161 daytime only. Ask for Mike.

**SEGA** Master system games buy or swap. Andy 0283 761783 or even buy hardware.

**BOOK** on machine code for the PC. N O Duncan, 10 Anstey Close, Basingstoke, Hants, RG21 3JG

**ZAT** the Fanzine for Spectrum and coupe users! Issue 4 out now. Interviews, strips, and more. Send 60p and stamp to: ZAT, PO Box 488, Tweedale, Telford, Shropshire TF7 4SU.

**MESSYDOS** problems on Amiga? After placing on mountlist and mounting type dir msh: For the Amiga to recognise the new file system (KFC.).

**FDKIT** v316e is now available for the PC. The most talked about utility program of the 90's for your (almost) free copy - call (0604) 843034.

**STEN** - ST enthusiasts newsletter - free, send disc and SAE for your copy. Dave Mooney - 14 School Road, Morningside, Newmans, Lanarkshire (0698) 382380.

**SPECTRUM** + manual wanted, outlet and Enigma progs on tape or microdrive. Also, ZX Spectrum - How To Get The Most Of It and a broken interface. J Heinrichsons 16 Kimmeter Place, Annan, DG12 6JU.

**BBC B** for sale, needs tape deck or disk drive, some tape games. Good condition only £75. Tel. 0255-434740 Andy after 6pm.

**ATARI** Portfolio pocket PC only 6 months old. Sell for £220 ono. Still in box as new. Tel. 0389-52680.

**ANY** computer system wanted. Phone on Hackney 249 7637.

**PC Engine** CD Rom unit wanted. Swap for megadrive and Gameboy plus games. Phone Rich 051 922 7642 mornings only 10 to 12.

**PROTEXT V4** for sale for the PC range of computers and compatibles. Brand new £30. Tel. 0705-696543.

**COMPUTER MAGS** - Zero 1-7, Ace 26-31, The One 13-19 £22 ono. the lot Tel. 0968-75014, ask for Rev. Henderson or leave a message on the machine.

**WANTED:** Bubble Bobble for the Amiga. Tel. 081-390 2068 evenings.

**AMSTRAD PC2286/2386** for sale. Microsoft Windows + MS-DOS 3.5" disk format. Reasonable offers. Tel. 0904-625016.

**AMIGA** games wanted. Also any offers of help. New owner who ain't got a clue. Steve, 36 Stanway Street, Gorsehill, Stretford, Manchester, M32 0JL.

## AMIGA PD AT THE LOWEST PRICES WE'LL BEAT ANY PRICE INCLUDING SPECIAL OFFERS BY FIFTY PENCE PER DISK

SAME DAY DESPATCH OF ORDERS PLACED BEFORE 4PM  
POSTAGE AND PACKING FREE OFFER ENDS 25TH OCTOBER 1990  
MINIMUM ORDER £2 MINIMUM ORDER BY CREDIT CARD £5



**0295 262029 9AM-7PM**



**NCE OFFER, 30 Parsons St  
Banbury, Oxon OX16 8LY**

Cheques/POs Payable to NOVA

## A & A SUPPLIES

Wide range of Commodore and Atari products including Amiga Batman/Flight of Fantasy Pack at very competitive prices

Please ring Jason for details

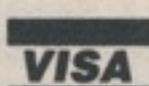
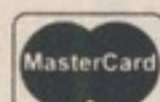
**0908 216312**

14 The Green, Newport Pagnell,  
Bucks MK16 0JW

FAX: 0908 211057

24 Hour credit hotline

**0908 216312**



**WANTED** - hard drive for use with ST. All offers welcome. Robert Wood, 16 Gordon Road, Shoreham, West Sussex, BN43 6WE

**AMIGA** formal issue six, will pay £3.45 if in good condition with disk. Tel. St Albans 0727 58864 after 6 pm weekdays.

**WANTED:** 1 MEG STFM disk drive internal only. Tel. 0993 84558859 after 5 pm

**WANTED:** Amiga A590 harddrive (must have packaging and be in VGC). Also required 1.3 version professional page templates etc. 0770 749630

**UNDERWURLOE** wanted for 48K Spectrum. Write with price to Scott, 20 Nene View, Islip Kettering, Northants., NN14 3LD. Only "Ultimate" original

**MSX** Disc drive wanted and 80 columns cartridge for Spectravideo Express. Also circuit for Pioneer PX7 Dave 0908 501310 Milton Keynes.

**WANTED** Broken Amiga 500 any condition considered, must live within 50 miles of south Lincs. Tel (0778) 393470.

**ADAMSKI** N-R-G CD single wanted or Pet Shop Boys Opportunities (any format) contact Grainger on (0536) 67520.

**WANTED** Multiface II plus Printmaster for Amstrad CPC 6128. Tel (0203) 362063 anytime.

**WANTED** Apricot F1E. Sensible prices please. Also required software (Wordstar/Cobol). Ring Nic (0392) 433579.

**WANTED** Amiga A2000 with or without monitor. Must be in good condition. Cash waiting. Ring (021) 471 3335 Simon.

**BBC MASTER 128** microcomputer, monitor, 40/80 track drive, data recorder. Little used. £500. Tel. Basingstoke 781408.

**USERS** manual Apple II Silentype printer type A2M0032 wanted. Also full circuit diagram for printer and board. Cash waiting Hobden St Blazey. Tel: Par. (072 681) 7166.

**EMULATE!** THE independent Amiga Amax user group now setting up all Amax users. Write to Emulate! 126 Nothbrooks, Harlow, Essex.

**ATARI** ST/STE disk mag issue news, PD, DTP etc. Free! Send blank disk and SAE to Paul Sealy, 31 Hartfield Crescent, West Wickham, Kent.

**BEEB** Public Domain! Send SAE to: Rafael Jay, Onslow House, Weston Road, Bath, Avon BA1 2XX for catalogue.

A courier HST 19200 Baud Rate Modem. Must be 100% working. Contact me now! Also Amiga contax wanted! See Ya! Tahir, 134 Bellingdon Road, Chesham, Bucks., HP5 2HF

**CANVAS** Art Program fed up with the on line manual? Need a professional print-out? £4 including folder - Peter Kempley, Aldershot 313566

**HELP** offered with any aspect of Quickbasic Programming. Write with SAE to: Howard Glynn, 7 The Gardens, Monkseaton, Whitley Bay, NE25 8BG

**NM156** is the best, if you have a C64 then forget the rest! If you like a good game then remember my name. N Higgins, 109 Edward Street, Denton,

**AMIGA** PD for just 80p only. Just started up! SAE for list to R & G PD, 123 Melmound Gardens, Strabane, Cotyone, N. Ireland. Also cheap PD wanted!

**SHEFFIELD'S** alternative solution BBS 0742 325232. V21/22/22B1S/32/14.4K HST 8N1 24 hours. Apricot F1 720K floppy drive wanted. Why?

**VARIOUS BBC** equipment for sale including keyboard, printer screen etc. All offers considered. Tel. 0277-654095.

**SPECTRUM 48K+** with 100 games. Only £100. Call us on 0272-324230.

**WANTED 64K MEMORY** expansion for CPC664. Also system disks for 6128. Reasonable prices please. Write to S W Bain, 59 Cummings Park Circle, Aberdeen, AB2 7AL

**TANDY DMP106** printer. Serial/parallel dot matrix £80 or exchange for CBM MPS printer 0709-853786.

**SPECTRUM ROM DISASSEMBLY** and other books. Send SAE for details to: M Perry, 216 Marpool Land, Kidderminster, DY1 15DL.

**WANTED** Vic-20 tape recorder and/or games. Will swap for sharp pocket computer or cash/negotiable. 21 Whitehorse Street, Hereford, HR3 0EP

**EPSON** MX-80 printer manual required. Buy or borrow. Reasonable price or postage paid. Tel. Nottm 0602 289698 after 6:30 pm

**PORTFOLIO** Atari/DiP. Good condition only. Name your price! 0251 264962

**WANTED** cheap hardcard or disk for AT compatible. Any size considered as long as it's cheap. Steve 0705 375409

**WANTED** anyt good AD+D games on C64 disk eg. Dragon Wars. Also Salamander2 for sale for the MSX E15. Write to N Raithby, 27 Runswick Road, Grimsby, CN32 8HD

**FIRST** Word.Plus wanted for the ST V3 only. Will pay cash. Ring Stef 0469 60009

**BUG** found in Beast 2, Shoot the demon who has encased your friend in electric beam. Then try bribing your friend, see what happens!



**PHONE**  
Blandford  
(0258) 451347

# BUILD IT YOURSELF!

**FAX**  
(0258)  
456046

## MOTHERBOARDS

**XT TURBO** 12MHz, V20,  
Small size, takes 256k x 4 DIL.  
£62.10

**AT TURBO**  
12MHz, baby size up to  
4M on board. £158.00

**AT TURBO** 16MHz version  
£205.00

**AT TURBO**  
with EMS 12MHz, up to 5Mb on  
board. £188.00

**386SX ALL-IN-ONE** 16MHz  
includes floppy, serial and parallel  
ports. Takes 1M x 1 £399.00

Memory is available for all these  
boards. Please call for current prices

## I/O ADAPTORS

**SERIAL RS232** £16.10

**DUAL RS232** £24.10

**SERIAL/PARALLEL/GAME**  
Com 1, 2, 3, 4, Par 2, 3 Links £14.50

**DUAL SERIAL + PAR**  
+ GAME £25.00

**XT SERIAL/PARALLEL/  
CLOCK/FLOPPY/GAME** £31.50

## DISPLAY ADAPTORS

**HERCULES** plus printer £39.20

**DUAL CGA/HERC** £38.00

**EGA PLUS** £99.50

**VGA 8 bit** £99.00

**UNIVERSAL VGA** 8/16 bit VGA,  
EGA, CGA, MDA, Hercules.  
Standard plus 800 x 600 plus  
1024 x 768 resolution £137.00

## FLOPPY DRIVES

5.25" 360K ..... £66.70  
5.25" 1.2M ..... £80.50  
3.5" 720K ..... £71.76  
3.5" 1.44M ..... £85.56  
5.25" cradle for 3.5" drive  
adaptor and cables ..... £12.50

## KEYBOARDS

101 Key XT/AT switch £46.00  
101 CHERRY XT/AT £65.50

## MONITORS

MONO 12" green £73.00  
VGA 14" paper white £165.60  
VGA 14" colour £389.00

## PC-DIY BOOK

If you are not sure how to go  
about building your own PC,  
then this is for you! 112 pages  
full of practical tips for £7.95  
inclusive. (NO VAT)

Remember! All our prices  
include VAT.  
Call for FREE catalogue  
Carriage £2.00 for goods  
under £40, £9.00 for goods  
over £40 in total

## CASES AND PSUS

**XT/AT**  
Three 5.25" and 3.5"  
slots or disks, flip top lid £44.50

Suitable 180W PSU £44.85

**DE-LUXE** With speed  
display £65.00

Suitable 200W PSU £69.00

**MINI TOWER** with  
speed display £72.50

Suitable 200W PSU £69.00

## BLACKMORE ELECTRONICS LTD

Unit 14A, Sunrise Business Park, Blandford Forum,  
Dorset DT11 8ST. Telephone Blandford (0258) 451347  
WE TAKE ACCESS, VISA AND AMERICAN EXPRESS.

## DISK CONTROLLERS

### UNIVERSAL FLOPPY

DRIVES 380/1.2/720/1.44 drive  
AT and 386 systems ..... £24.50

XT Hard/Floppy controller £81.00

XT Hard disk controller ..... £65.00

AT floppy/hard controller £107.00

## "SKELETON" SYSTEMS

These consist of motherboard,  
case and PSU. You add the rest!

XT 12MHz ..... £155  
AT 12MHz ..... £250  
AT 16MHz ..... £305

TEL: LEEDS (0532) 637988

# FIRST CHOICE COMPUTERS

UNIT 8, ARMLEY PARK COURT, OFF CECIL STREET, ARMLEY, LEEDS LS12 2AE

ALL PRICES INCLUDE VAT & DELIVERY. ALL OUR PRODUCTS ARE GENUINE UK SPECIFICATION. FULL REPAIR SERVICE AVAILABLE FREE ESTIMATES

NEW  
LOW  
PRICES

## HARD DRIVES

### AMIGA A590 20 MEG

The Commodore A590 has a built-in  
unpopulated RAM board, so you can  
easily upgrade your Amiga memory by  
up to 2 megs without invalidating your  
warranty. (Autoboos 1.3 only)

£349.99

Add £40.00 for each 1 meg of  
expansion

### AMIGA A590 20 MEG With 2 meg of RAM £429.99

DRAM CHIPS (256\*4) TOSHIBA,  
SAMSUNG, MOTOROLA, INTEL.

Quantity 4 + ..... £5.49 each  
Quantity 8 + ..... £5.19 each  
Quantity 16 + ..... £5.00 each

## DISK DRIVES

CUMANA AMIGA ..... £71.99  
CUMANA ST ..... £77.99

## COMPUTERS

**NEW AMIGA SCREEN GEMS PACK**  
WITH BACK TO THE FUTURE 2, DAYS OF  
THUNDER, KNIGHT BREED, SHADOW OF  
THE BEAST II & DELUXE PAINT II

£369.00

### NEW XMAS PACK

ALL YOU NEED TO GET STARTED WITH YOUR  
AMIGA. INC. 3 EXTRA GAMES, 10 DISKS, MOUSE  
PAD, CRUISER BLACK JOYSTICK, AND DUST COVER.  
ONLY £30.00 EXTRA WITH ANY AMIGA PACK

### AMIGA CLASS OF THE 90'S

INC: KINDWORDS 2, MAXIPLAN SPREADSHEET,  
SUPERBASE II, MIDI/MUSIC SOFTWARE, GRAPHICS  
SOFTWARE, DTP, MOUSE, MODULATOR, 10  
DISKS, MOUSEMAT AND MORE!!!  
NOW WITH 1 MEG OF RAM

£549.99

### ATARI 520STFM DISCOVERY PACK

INC: 4 GAMES, STOS, NEOCHROME,  
FIRST BASIC

£279.00

### ATARI 1040 STE EXTRA PACK

INC: 1ST WORD, ST BASE, ST CALC, ST GRAPH, FIRST  
BASIC, S.T.A.C. ADVENTURE CREATOR, HYPERPAINT,  
PRINCE (STRATEGY GAME), METACOMCO BASIC,  
MOUSE AND MANUALS

£429.00

NEW

## NEW STAR PRINTER RANGE OUT NOW!

**PC200 COLOUR 9 PIN** 180 cps  
draft, landscape printing, 8 resident fonts

£214.99

**PC 24-200 24 PIN** 222 cps draft,  
10 resident fonts, landscape printing

£259.99

## PRINTERS INC LEADS

STAR LC10 MONO ..... £159.00  
STAR LC200 COLOUR ..... £214.99  
STAR LC24-200 ..... £259.99  
CITIZEN SWIFT 24 ..... £289.99  
SWIFT COLOUR UPGRADE ..... £34.99  
EPSON EPL700 LASER ..... £919.99

### AMIGA 2 MEG BOARDS

512K POPULATED ..... £56.99  
1 MEG POPULATED ..... £93.99  
1.5 MEG POPULATED ..... £114.99  
2.0 MEG POPULATED ..... £129.99

RING US FOR DETAILS NOW!

NEW  
LOW  
PRICES

## 3.5 INCH DISKS

**SONY/VERBATIM**  
BULK 100% ERROR FREE,  
135 TPI LIFE TIME  
GUARANTEE

QTY ..... £

10 ..... £5.99  
25 ..... £13.99  
50 ..... £25.99  
100 ..... £47.99  
200 ..... £86.99  
300 ..... £115.99  
400 ..... £149.99  
500 ..... £179.99  
1000 ..... £349.99

DISK LABELS 500 ..... £7.99  
DISK LABELS 1000 ..... £13.99

## MONITORS INC. LEADS

PHILIPS CM8833 ..... £239.99  
COMMODORE 1084 SD ..... £259.00  
ATARI SM124 ..... £109.99

- OPEN MON-SAT 9.00AM - 5.30PM
- SUNDAY OPENING 10.00AM - 3.00PM
- THURSDAY NIGHT LATE TIL 8.00PM

- FAST MAIL ORDER SERVICE
- FREE POSTAGE UK MAINLAND
- FREE 2-3 DAY COURIER SERVICE
- SPACIOUS FREE PARKING
- FULL REPAIR SERVICE FREE ESTIMATES

CALL INTO OUR SHOWROOM OR  
ORDER BY TELEPHONE  
TEL 0532 637988  
FAX 0532 637689





# Evesham Micros

- ALL PRICES INCLUDE VAT & DELIVERY -

Buy with confidence from one of the longest established companies in their field, with a reputation for good service and prices. We have invested heavily in a computer system to enable our Telesales staff to provide up-to-the-minute stock information, coupled with highly efficient order processing. Our fully equipped Workshop enables us to carry out almost any repair on our premises. We feel sure that you won't be disappointed if you choose Evesham Micros.



**AMIGA  
SPECIAL  
DEALS**

Our A500 Packages also include the following :

Karate Kid II  
Leatherneck  
Battle Squadron

Jaws  
Defcon 5  
High Steel

Wordwright (w processor)  
Nigel Mansell's Grand Prix  
Better Dead than Alien

Super Huey  
Goldrunner  
Night Walk

Amiga 500 512K Screen Gems pack including 'Back to the Future 2', 'Night Breed', 'The Beast 2', 'Deluxe Paint 2', Days of Thunder' and TV modulator ..... £379.00

Amiga 500 1Mb Screen Gems pack upgraded to a full 1Mb using our 512K RAM/Clock ..... £409.00

Amiga 500 Screen Gems pack with Drive includes our high quality 3 1/2" External Drive ..... £430.00

Amiga 500 1Mb Screen Gems pack with Drive features our 512K RAM/Clock Upgrade plus our 2nd 3 1/2" External Drive ..... £465.00

Vidi-Amiga video digitiser package ..... £95.00  
Vidi-Chrome colour accessory for Vidi-Amiga ..... £16.00  
MiniGEN Genlock Adapter ..... £95.00  
Contriver Hi-Res replacement Mouse package ... £22.95  
Naksha Hi-Res replacement Mouse package ..... £28.95  
Kraft Trackball (plugs into mouse / joystick port) .. £44.95

Philips CM8833 colour monitor inc.cable ..... £249.00  
Kickstart 1.3 Upgrade pack ..... £29.95  
AMOS Game Creator ..... £37.50  
Music-X incredibly powerful music package ..... £129.00  
Home Accounts (Digita) ..... £18.95  
Amiga 500 dust cover ..... £4.95

## CBM A590 HARD DRIVE

Good quality Commodore 20Mb Hard Disk, including its own PSU and built-in cooling fan. Features sockets for up to 2Mb of RAM expansion (see below). Autoboos when used with Kickstart 1.3.

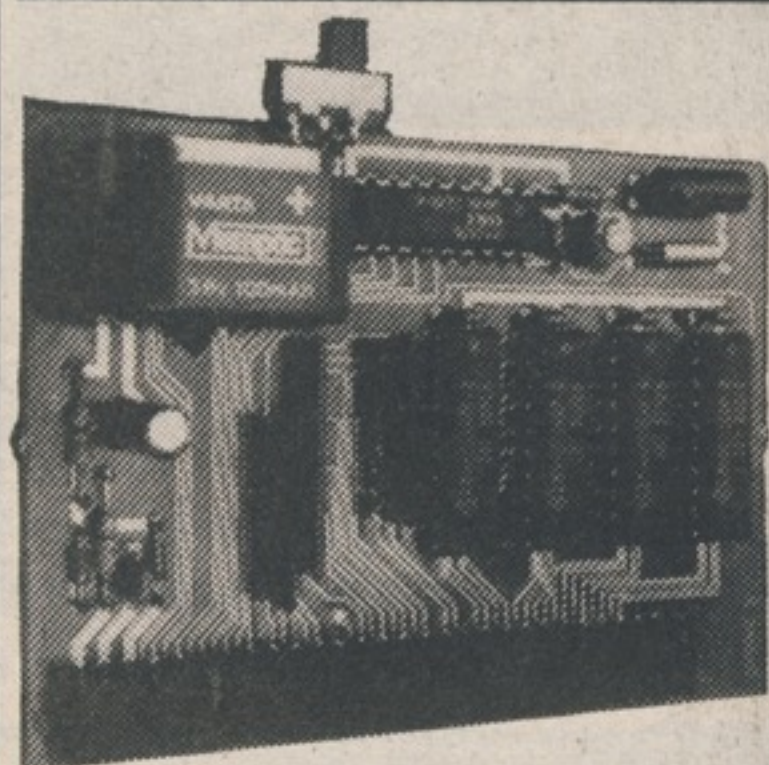
A590 (20Mb) only £379.00

40Mb version only £499.00

A590 512K RAM Upgrade kit ..... £31.95  
A590 1Mb RAM Upgrade kit ..... £59.95  
A590 2Mb RAM Upgrade kit ..... £99.95  
RAM upgrades fitted free when bought with A590.

Genuine replacement Commodore Amiga PSU .. £39.95

## A500 SOLDERLESS RAM UPGRADES



**512K  
MEMORY  
UPGRADE**

**ONLY £37.95**  
including VAT & delivery

### 512K RAM/CLOCK EXPANSION FEATURES :

- ☆ Direct replacement for the A501 expansion
- ☆ Convenient On / Off Memory Switch
- ☆ Auto-recharging battery backed Real-time Clock
- ☆ Compact unit size : Ultra-neat design
- ☆ Only 4 low power consumption FASTRAMs

512K RAM expansion without clock only £32.95

## NEW! 1.5MB RAM BOARD

- ☆ Fully populated board increases total RAM to 2MB !
- ☆ Plugs into the trapdoor expansion (as with 512K unit)
- ☆ Auto-recharging Battery Backed Real-Time Clock
- ☆ Socketed FASTRAM ICs for accommodation up to 1.5MB

Unpopulated RAM Expansion Board with Clock ..... £39.95

RAM Board with Clock, with 512K FASTRAM installed ..... £64.95

RAM Board with Clock, with 1 Mb FASTRAM installed ..... £84.95

RAM Board with Clock, with full 1.5Mb FASTRAM installed .... £99.95

N.B. Requires Kickstart 1.3 to operate - Kickstart 1.3 Upgrade available from us for £29.95

## SPECIAL NEW AMIGA PRODUCTS

**MIDI  
INTERFACE**  
Only £19.95

### GET CONNECTED !

Our new fully compatible, high quality MIDI interface connects directly with the Amiga serial port and provides IN, OUT and THRU ports for good flexibility. Features LED indicators on each port to assist ease of use and also for diagnostic purposes. Superb compact design.

**'TESSA'  
speaker system**  
Only £34.95

### HEAR THAT STEREO !

Your Amiga produces excellent quality hi-fi stereo sound. Enjoy high quality, stereo sound reproduction to the full with our great new twin speaker system, TESSA (twin ergonomic stereo speakers, amplified). Incorporates a specially designed, quality 2.5 watt per channel amplifier, including volume control, to obtain the best sound.

**STEREO SOUND  
SAMPLER**  
Only £29.95

### S-S-SAMPLE THIS !

Offering full compatibility with almost any Amiga audio digitiser software, our Sound Sampler features excellent circuitry, yielding professional results. The main A/D converter gives a digitising resolution of up to 50KHz, with a fast slew rate. Two phono sockets are provided for stereo line input, plus an option for microphone. Adjustable gain is achieved with built-in control knob. Complete with public domain disk containing sound sampling applications / utilities.

## Amiga & ST 3 1/2" Drives



- Very quiet
- Slimline design
- Cooling Vents
- Sleek, high quality metal casing
- Quality Teac / Citizen mechanism
- On / Off switch on rear of drive
- Throughport connector (Amiga)
- External plug-in PSU (Atari ST)
- Full 1Mb unformatted capacity
- Long reach connection cable

### ATARI ST VERSION :

**£64.95**

### AMIGA VERSION :

**£59.95**

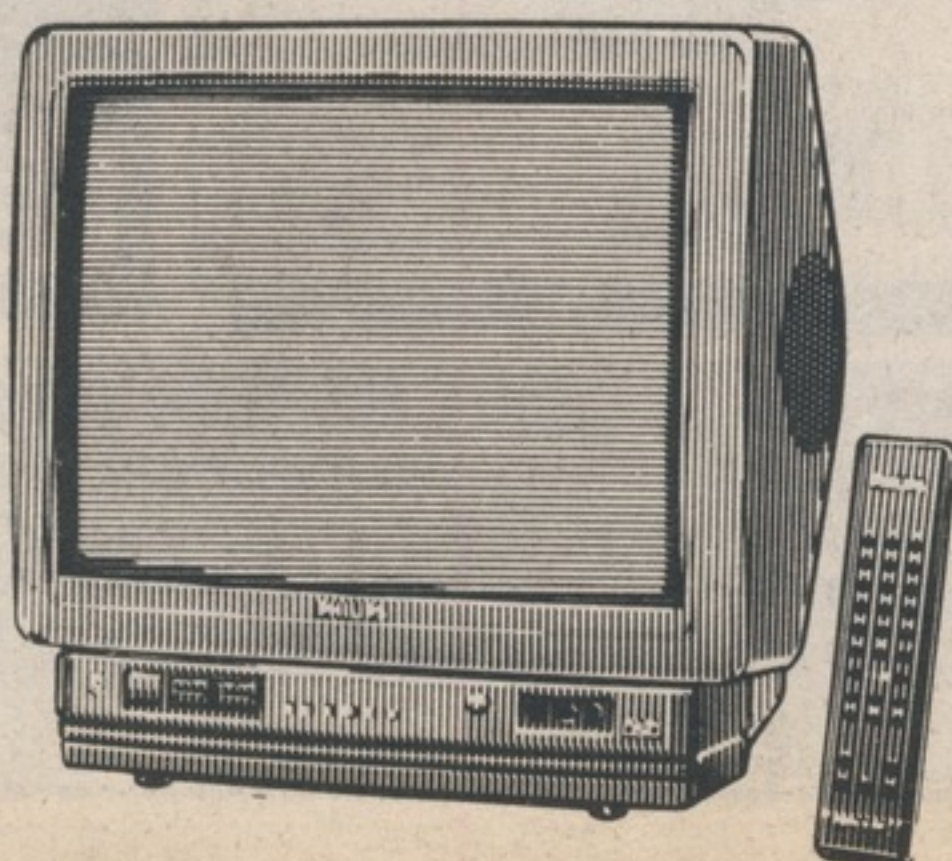
5 1/4" External 40/80 Track Drive also available, only £99.00

## PHILIPS 15" FST TV / Monitor (MODEL 2530)

With its dedicated monitor input, this model combines the advantages of a high quality medium resolution monitor with the convenience of remote control Teletext TV - at an excellent low price !

**£269.00**

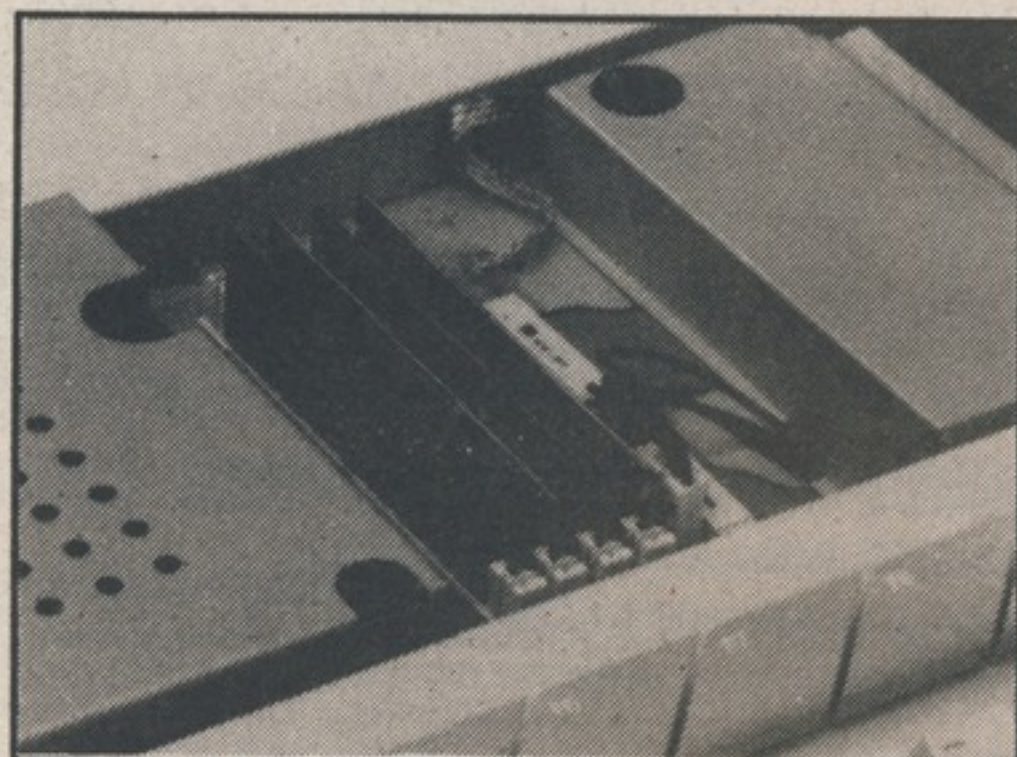
includes VAT, delivery and computer connection lead





NEW

# SOLDERLESS MEMORY UPGRADES FOR ANY ST



- ✓ Fits Any pre-STE Machine in Minutes !
- ✓ Uses SIMMS RAM Modules for Effortless Upgradeability
- ✓ Probably the Neatest ST RAM Upgrade available !

RAM Upgrade Kit with board unpopulated ..... £59.95

RAM Upgrade Kit With 512K RAM installed:  
upgrades a 520 ST to total of 1Mb RAM ..... £89.95

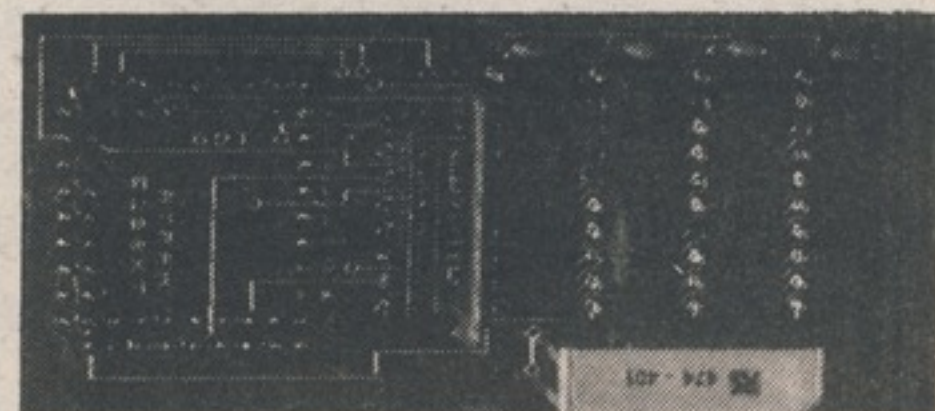
RAM Upgrade Kit With 2Mb RAM installed:  
upgrades a 520 / 1040 / Mega ST1 to 2.5Mb .... £174.95

RAM Upgrade Kit With 4Mb RAM installed:  
upgrades a 520 / 1040 / Mega ST1 to 4Mb ..... £284.95

N.B. Due to the large variance in design of the Atari ST, there is a small minority of boards in existence which may require a small amount of soldering.

Upgrade the memory of your ST quickly and easily with our new, fully software compatible RAM upgrade board. Designed for pre-STE machines, the unit accepts SIMMS slot-in memory modules, making RAM fitting simplicity itself. *No soldering required! No electronics knowledge needed!* Available with or without RAM modules. Allows upgrade in stages of 1Mb, 2.5Mb and 4Mb, as and when necessary. Straightforward installation - full instructions provided.

## NEW! PLUG-IN, SOLDERLESS 512K RAM UPGRADE FOR ANY ATARI 520 ST



Now there is a simpler, faster and more effective method of upgrading your humble 520 ST to 1Mb RAM ! Our new plug-in 512K memory upgrade unit offers excellent value for money, requiring no soldering or special technical know-how. (Not suitable for STE machines.)

**ONLY £69.95** including VAT and delivery

### ATARI

All our ST prices include: mouse etc. plus 5 disks of software including 'First Word' wordprocessor, utilities, Neochrome' graphics utility, game and demos.

#### 520 STFM DISCOVERY PACK

Good quality, good value package based around the 520STFM computer including 512K RAM, 1Mb Drive and built-in TV modulator. Also supplied is:

STOS Game Creator  
Carrier Command  
Space Harrier  
First BASIC  
Outrun  
Bomb Jack  
Neochrome  
Atari ST Tour  
plus 'Discovering your Atari ST' Book

**£259.00**  
Including VAT and delivery

#### 1040 STE PROFESSIONAL PACK

Excellent starter package, including the very latest 1040STE machine with 1Mb RAM, 1Mb Drive, plus the following extras:

Kuma Wordprocessor  
Kuma Database  
Kuma Spreadsheet  
Kuma Business Graphics  
STAC Adventure Creator  
Hyper Paint (STE version)  
First BASIC  
'Prince' game

**£429.00**  
Including VAT and delivery

#### NEW! 520 STE TURBO PACK

Features the latest 520STE with 1Mb drive, joystick, mouse, user guide, 5 disks of public domain software, plus a high quality selection of entertainment and creativity software, including:

Indiana Jones & the Last Crusade  
Impossible Mission II  
Human Killing Machine  
Dragons Breath  
Hyper Paint 2 (STE version)  
Music Maker 2 (STE version)  
Blood Money  
Super Cycle  
Out Run  
Anarchy  
First BASIC  
STOS

**£339.00**  
Inc. VAT & Delivery

520STE RAM upgrade to 1Mb, includes 2x256K SIMMS modules	£40.00
520/1040STE RAM upgrade to 2Mb, includes 2x1Mb SIMMS modules	£119.00
520/1040STE RAM upgrade to 4Mb, includes 4x1Mb SIMMS modules	£235.00
520STFM 1Mb Drive Upgrade Kit with full fitting instructions	£54.95
520STFM 1Mb Memory Upgrade Kit, requires soldering	£59.00
Mega ST1 with monochrome monitor	£599.00
Mega ST2 with monochrome monitor	£849.00
Mega ST4 with monochrome monitor	£1099.00
SM124 monochrome monitor	£99.00
SC1224 colour monitor	£279.00
Philips CM8833 14" colour monitor (stereo sound) c/w ST cable	£249.00
Vidi-ST 16-tone video frame grabber inc. digitising software	£89.00
NeoDesk V3 Desktop replacement	£29.95

## PRINTERS

All prices include VAT, delivery and cable

### star

EVESHAM MICROS SPECIAL OFFER - ALL STAR PRINTERS INCLUDE 12 MONTHS ON-SITE MAINTENANCE!

Star LC10 best-selling 144/36cps printer, 4 NLQ fonts	£159.00
Star LC200 NEW replaces LC10 Colour model, with new features: 180/45cps with bottom feed facility and push/pull tractors	£209.00
Star LC15 wide carriage version of LC10	£329.00
Star LC24-10 feature-packed multifont 24 pin printer	£239.00
Star LC24-15 wide carriage version of LC24-10	£409.00
Star LC24-200 NEW updated ver. of LC24-10 with bottom feed facility, push/pull tractors and a print speed increase to 200/67cps	£249.00
Star LC24-200 NEW 7-colour version of LC24-200, excellent value	£289.00
Star FR-10 Professional 9pin 300/76 cps, 31K buffer, 16 NLQ fonts, EE-PROM configuration memory and 12 months on-site maintenance	£399.00
Star FR-15 9pin as FR10, wide carriage version	£499.00
Star XB24-10 Professional 24pin: 27K buffer, 4 SLQ & 25 LQ fonts with EE-PROM configuration memory and 12 months on-site maintenance	£499.00
Star XB24-15 wide carriage version of XB24-10, with 41K buffer	£649.00
Hewlett Packard Deskjet Plus 300dpi Inkjet printer - while stocks last!	£399.00
NEC P2+ budget 24pin, special low price!	£239.00
Panasonic KXP1180 super 9pin with over 3400 typestyles, 11" carriage	£179.00
Panasonic KXP1124 good quality 11" multifont 24pin printer	£269.00
Panasonic KXP1624 wide carriage version of KXP1124	£399.00
Epson LX400 popular 10" 180/25 cps	£159.00
Epson LQ550 good 24pin printer 150/50 cps	£349.00

## Western Digital Filecards

Upgrading your PC to hard disk? Look no further, we offer the best prices on top quality filecards, with ultra-competitive speed ratings. Thorough documentation supplied, low power consumption, with free XTree file management software and Speedread. For Amstrad PC 1512/1640/2086 users we supply filecards tested and formatted, with our simple software installation procedure. Probably the best packages available!

**21MB...£225.00 32MB...£239.00 41MB...£279.00**

# ATARI AMSTRAD

Buying a PC? Shopping around for the best deal?  
Evesham Micros is one of the UK's leading suppliers of Olivetti, Amstrad, Sharp and Atari PC's, offering highly competitive deals at the lowest prices. Contact us now for a quote!

# OLIVETTI SHARP

## Evesham Micros

RETAIL SHOWROOMS

63 Bridge Street  
Evesham  
Worcs WR11 4SF  
☎ 0386-765180  
fax: 0386-49761  
Open Mon-Sat, 9.00 - 5.30

5 Glisson Road  
Cambridge CB1 2HA  
☎ 0223-323898  
fax: 0223-322883  
Open Mon-Sat, 9.30 - 6.00  
Specialist Education Centre

1762 Pershore Road  
Cottrelidge  
Birmingham B30 3BH  
☎ 021-458 4564  
fax: 021-433 3825  
Open Mon-Sat, 9.00 - 5.30



Call us now on ☎ 0386-765500  
8 lines, Open Mon-Sat, 9.00-5.30. Fax: 0386-765354  
Technical support (open Mon-Fri, 9.30-5.30): 0386-40303

VISA

Send an Order with Cheque, Postal Order or ACCESS/VISA card details. Allow 10 days personal cheque clearance.

Government, Education & PLC orders welcome. All products covered by 12 Months Warranty. All goods subject to availability. E & OE.



# If winning is your goal... take aim with

## SCOREDRAW

The **COMPUTERISED** comparative analysis system for predicting football results

### Includes:

Fixtures for Barclays league, Scottish & Beazer Homes, and GM Vauxhall Conference.

### Features:

Previous season's games, over 10000 games DataBase, including results, League tables etc.,

### Flexible:

Add, Delete, Change fixtures - add your own games, Cup matches or even local leagues!  
Variable prediction parameters - Input your own preferences to give unique results.  
Allows you to keep track of all scores and analyse results obtained with different prediction patterns.

Written by a professional team of computer experts

**£59.95** + VAT & Carriage

(Total price £71.95)

For MS - Dos Systems

Full turn key system to include Scoredraw, Goldstar 286, 12.5 MHz IBM compatible machine, 40 MByte disc, mono VGA at £1199, plus VAT & carriage (VGA colour add £250).

### RDN Datasystems Ltd

P.O. Box 44, Hastings, East Sussex, TN34 2SY.

Payment by Cheque, Access or Visa

(cheques payable to:-RDN Datasystems Ltd.),

or telephone: 0424 752288



## London Computer Auction Rooms Ltd

On Saturday 27th October 1990  
and on 10th November at Barnet College, Wood Street, Barnet  
Hackney Free School  
Paragon Rd, London. E9

Over 1000 lots of liquidated & bankrupt stock  
More systems, better systems,  
P/S 2 & AT compatible 286, 386 & 486 systems by:  
IBM, Compaq, Amstrad, Olivetti, Apricot, AES, etc  
Macintosh II & SE systems, PostScript & other laser, Hewlett Packard Deskjet Plus,  
24 pin dot matrix & Fujitsu colour printers,  
Late version software - Wordstar 6.00, Pagemaker, Word Perfect v5.00,  
Autocad v2.6, Novell Netware, etc, etc, VGA, colour monitors  
Function & controller cards, supplies & consumables  
Sale Starts 11.00 am, view 9.00 am morning of sale

Telephone or write for free catalogue:

071 794 1116 / 1097

Fax: 071 794 1889

392 Finchley Rd

London NW2 2HR

Please phone for details of future dates & venues



# MICROSMART MAIL ORDER

**Tel: 0908 564369**

**SOUND EXPRESS STEREO SAMPLING HARDWARE AMIGA £29.99**

**AMIGA MEGA DEALS!!!**

**FREE HOLIDAY ACCOMMODATION**

For two people Voucher with every Machine Purchased.  
Resorts available are Florida, Majorca, Malta, and Southern Spain.

## **AMIGA A500 BAT GAMES OR SCREEN GEMS PACK** £399 inc VAT & next day courier

### **BAT Games Pack Includes:**

- ★ 10 free Games inc. Blasteroids, Wizball, Menace, Buggy Boy, Tetris, Drivin Force.
- ★ Amiga A500 512K Keyboard with built in 1 Megabyte Disk Drive
- ★ Free TV Modulator worth £24.99 allowing you to use the Amiga with a normal TV.
- ★ DELUXE PAINT 11 GRAPHICS PACKAGE.
- ★ FREE only just released BATMAN - THE MOVIE games software
- ★ NEW ZEALAND STORY arcade games software.
- ★ F16 INTERCEPTOR - amazing 3D flight simulator software.
- ★ FREE JOYSTICK, MOUSE MAT AND 10 BLANK DISKS.
- ★ AMIGA BASIC Amiga EXTRAS 1.3 Workbench 1.3 PLUS the Amiga Step by Step Tutorial.
- ★ All leads manuals PLUS MOUSE and Mainsplug!

## **THE ULTIMATE SOCCER COLLECTION** **AMIGA A500**

Incl. Kick Off 1, Kick Off 2, Microprose Soccer, Kenny Dalglish, Player Manager, Tracksuit Manager  
**£449**

## **£399 MICROSMART SOUND & VISION** **A500 PACK INCLUDING:**

Amiga A500 512K keyboard with 1 Megabyte disk drive. Free TV modulator worth £24.99 allowing you to use the Amiga with a normal TV. Deluxe Paint II graphics package. Fantavision - animation package. Sound Express - state of the art + stereo sampling hardware, includes free software. Batman The Movie - games software. New Zealand Story - arcade games software. F-16 Interceptor - amazing flight simulator. Free joystick mouse mat, and 10 blank disks. Amiga Basic, Amiga extras, Workbench 1.3, plus Amiga Step By Step tutorial. All leads and manuals plus mouse and mains plug.

## **AMIGA A500 CLASS OF THE 1990'S** **BUSINESS + EDUCATIONAL PACK** £499 inc VAT & next day courier

### **FEATURES:**

- ★ Amiga A500 - TV Modulator
- ★ Midi Interface - Software
- ★ Kind Words 11 word processor
- ★ Page Setter DTP
- ★ Super Base Personal Database
- ★ Maxplan 500 Spreadsheet
- ★ Amiga Logo BBC Emulator
- ★ Deluxe Paint II
- ★ Mouse Mat 10 Blank Disks and disk wallet

## **AMIGA 1 MEG BAT GAME PACK** £499 inc VAT and next day courier

- 1 Meg Bat Games Pack Includes:
- ★ Fitted 1 Megabyte Memory Expansion + Real Time Clock Card
  - ★ Everything listed for the A500 Bat Game Pack
  - ★ DRAGONS LAIR 1 MEG MEGADRIVE!

## **SCREEN GEMS PACK**

INC. Shadow of the Beast 2  
Days of Thunder  
Night Breed  
Back to the Future II  
Deluxe Paint II  
**£369**

## **ACCESSORIES**

Quickshot II Turbo Joystick.....	9.99
Quickshot III Turbo Joystick.....	9.99
Competition PRO Extra Joystick.....	12.99
Speedking Autofire Joystick.....	9.99
Mouse Mats.....	3.99
Contriver Replacement Mouse.....	18.00
(Mouse Mat & Mouse House)	
Naksha Upgrade Mouse.....	29.99
(Inc Mouse House, Mouse Mat)	
Half Meg Upgrade inc clock.....	44.99
Disk Boxes 3.5" hold 40.....	6.99
Disk Boxes 3.5" hold 80.....	8.99

## **PRINTERS**

Star LC24 1024 Pin incl lead ST/Amiga.....	249.00
Star LC10 including lead for ST/Amiga.....	169.00
Star LC10 colour including interface lead for ST/Amiga.....	219.00

## **MONITORS**

Commodore Amiga A1084 Stereo MonitorInc lead.....	£269.00
Phillips CM8833 stereo colour monitor inc lead for ST or Amiga.....	£259.00

## **MICROSMART MEGA DEALS !!!**

Half Meg Upgrades including clock.....	£44.90
512K Upgrade Inc. Clock with It Came From The Desert.....	£64.99
512K Upgrade Inc. Clock with Gold of the Realm.....	£49.99
512K Upgrade Inc. Clock with Dragons Lair.....	£69.99
512K Upgrade Inc. Clock with Space Ace.....	£69.99
512K Upgrade Inc. Clock with Dungeon Master.....	£69.99
512K Upgrade Inc. Clock with Manhunter.....	£69.99
Naksha Mouse Inc. Mouse mat, Mouse house.....	£26.00
Contriver Replacement Mouse.....	£18.00
Quality Second Disk Drive.....	£69.00
Blank Disks Sony Unbranded with labels.....	69p each
KAO Unbranded with labels.....	60p each

**MICROSMART 24 HR HOTLINE 0908 564369**

TITLE	COMP	PRICE
TOTAL COST £:		

NCE 102

Have you ordered from us before? YES NO

Name .....

Address .....

.....

Tel No:.....

Please send this to **Microsmart**, 125 High St,  
Stony Stratford, Milton Keynes, MK11 1AT



[illegible]



## • BBS

**PECCAN'S BBS.** Up to V22 bis. Very friendly sysop. On the PC-relay (Rime) network. Support for MS-DOS and VCSD P-system. Call 0272 248076.

**YUKON HO! BBS.** Remote access support. Fidonet, Chatnet, on-line games. areas for IBM, ST, Amiga, Mac. Over 1300 files on-line. Immediate access to file areas. Large selection of GIF images. 14.4 HST, V22, V22 bis, HST. Call 0232 768163

**MACH II BBS.** One of the best in Glos. Amiga and PC. Plenty of files and on-line 24hr. Do yourlf a favour and call: 0242 260685

**BARNEY'S RUBBLE BBS.** Birmingham-based 24hours a day. 300-2400 baud .MNP5 Amiga, IBM PC. Programmers, pen-pal, Comms section. 100Mb downloads plus 30 local and echo conferences. Fidonet (2:253/153). Call 021-441 1801

**OPEN ACCESS BBS.** On-line 6pm til 8am Mon-Fri and 24hrs weekends. Give our friendly board a call now on 081-427 3974

01 For Amiga	071-377 1358	V21/22/22b/23
061 Pc Support	061-443 1529	V21/22/22b/23
4/abc	0460 64511	V21
Above Board	0254 682862	Hst
Absolute Zero Qbbs	081-741 7233	V21/22/22b/23
Advance Opus Hull	0482 28367	V21/22/22b/23
After Hours	0276 52096	V22/V22bis
Airtel	0342 717800	V21/22/22b
Aix-386	0905 52536	V21/22/22b/23
AJ Electronics	0452 309125	V21/22/23/23v
Alan Solomon's Bb	0494 724946	V21/22/22b/23
Alchemist	0666 504597	
Alma Bbs	0787 277745	
Alternate Reality	0352 856626	V21/22/22b/23
Alternative Reality	0959 76695	V21/23/23v
Alternative V/data	081-761 8220	V21/23/23v
Amiga Board	0268 510495	V22/22b/23
Amiga Connection	081-981 9289	V21/23
Amiga Shack	0737 361178	V21/22/22b/23
Amiga South-east	0293 28464	V21/22/22b/23
Amink Bbs	021-778 5868	V21/22/22b/23
Amtech Support	0202 294716	V21/22/22b
Andromeda Galaxy	0243 379430	V21/22/22b/23
Apple Crackers	0268 781318	V21/22/23
	0268 780724	V22/22b
Apricot Tech Support	021-456 2402	V21/22/22b/23
	021-456 2401	V21/22/22b
Arcoport	0252 737065	V21/23
Arena	0625 539063	V21/22/22b/23
Argus Project	091-490 0327	V21/22/22b/23
Arkham Bbs	081-952 5128	V21/22/22b/23
Aspects	061-792 0260	V21/22/22b/23
Atavachron	0480 412884	V23v
Attic	081-308 0466	V22/22b
Auld Reekie	031-663 9924	V21/22/22b/23
Avalon Northeast	091-564 0009	V21/22/22b
Babbie Bbs	0532 785964	V21/22/22b/23
Babbs Tower	0394 276306	V21/22/22b/23
Banat Board	081-783 1151	V21/22/22b/23
Bar	0904 642560	V21/23/23v
Barnabas	0708 852526	Hst
Barney's Rubble	021-441 1801	V21/22/22b/23
Basingstoke Opus	0256 728331	V21/22/22b/23
Bath Bbs	0225 835841/840060	
Bbs09	0705 736025	Hst
Bbz	081-663 3732	V21/22/22b/23
Beeb-tec	0472 276476	V23v
Betelgeuse 5	0463 231339	
Beyond Belief	0642 787898	V21/23
Big Bang Burger Bar	081-420 6356	V21/22/22b/23
Bike Shop	0705 827764	V22/22b
Bitmap Brothers	0245 413728	V21/22/22b/23

Bixbox	0634 200931	V21/22/22b
Blackpool College	0253 57941	V21/22/22b/23
Blindin' Bbs	01 764-0954	V21/23
Blitter	0292 671638	Hst
Body Matters	071-603 7581	V21/22/22b/23
Boggin	0532 483563	V23/23v
Boog Bb	0252 626233	V21/22/22b/23
Boroughbridge Qbbs	0423 324532	V21/22/22b/23
Bradford Bb	0274 480452	V21/23/23v
Braindead Opus	0823 254352	V21/22/22b/23
Breakthrough	051-734 5817	V21/22/22b/23
Brown Bag	071-404 0897	V21/22/22b
Brunel Bbs	0272 584352	V21/22/22b
Buz Board	081-202 9175	V21/22/22b
Buzby's Grapevine	041-762 2000	Hst
Byte Back!	081-959 8105	V23
Cargo BBS	0420 475462	V21/22/22b/23
Campus Ros	0223 357445	V21/22/22b/23
Castle Bbs	0276 691872	V21/22/22b/23
Cats Board	0628 824852	Hst
Catweazle	081-428 9476	V21/22/22b
Col4	0482 655798	V23/23v
Central Bbs	021-711 1451	V21/22/22b/23
Chase Wildcat U.g.	0543 871562	V21/22/22b/23
Chequers	0622 891308	V21/23
Chiba City	0501 44262	
Chipboard	0532 320225	V21/23/23v
Chronos' Lair	021-744 5561	V21/22/22b/23
Cix	081-399 5252	V21/22/22b/23
Clapham Junction	0234 64261	V21/22/22b/23
Cliff's Corner	0502 518274	V21/22/22b/23
Club 1512	081-204 8755	Hst
Co-op Board	081-316 6498	V21/22/22b/23
Co-op Board (cns)	061-832 1961	V21/22/22b/23
Co-op Board (nicc)	0509 826339	V21/22/22b/23
Co-op B'Mouth	0202 532701	V22/22b
Co-op P'Mouth	0705 754851	V21/23
Codeomatic Bbs	0472 250690	V21/22/22b/23
Communitel Demo	081-968 7402	V23v
Compass!!	0942 896661	
C'center Opus	071-928 2005	V21/22/22b
Computers 4 Christ	0926 428294	V21/22/22b/23
Connection	071-978 8540	
Connections	081-903 1309	V21/23/23v
Connex	071-431 3922	Hst
Consett Forum	0207 506179	Hst
Corby Town Opus	0536 205113	V21/22/22b/23
Corwall Gate Opus	0752 848806	V21/23
Cpim User Group	0753 868196	V21/22/22b/23
Critical Mass Bbs	0727 56939	V23/23v
Crown Green	071-245 1512	V21/22/22b/23
Crystal Tower	081-886 2813	V21/22/22b/23
Cure	0604 27865	Hst
Cv Database Bb	0427 810211	V22/22b
Cymrutel	0492 49194	
Cynotel	081-346 2816	V23v
D.i.e.	061-434 9907	V21/22/22b/23
Dabbs	0846 693067	V21/22/22b
Dambusters	0203 333195	V21
Dark Crystal	081-207 2989	Hst
Dark Halo	0392 434477	Hst
Dark Side	0446 33729	V21
Darkhaven	0604 413716	V21/22/22b/23
Data Network	081-478 5464	V21/22/22b/23
Datase/wanderland	081-680 5330	V23
Datasoft Opus Bbs	0460 54615	V21/22/22b/23
Datatrade Qbbs	0536 725180	Hst
Dbase User Group	0532 842213	V21/22/22b
Doe Board	0296 88165	V21/22/22b
Dcs	081-879 7578	V21/22/22b
Deep Thought	0634 683696	Hst/V32
Deeply Wonderful	0455 557261	
Desert	0244 550332	V21/22/22b/23
Diamond Opus	0791 86504	Hst/V32
Diggertel #1	0925 411265	V21/22/22b/23
Digital Matrix	021-705 5187	V21/22/22b/23
Direct-line 1	081-841 1847	V21/22/22b/23
Direct-line 2	081-842 2030	V21/22/22b
Domain Bbs	081-773 2422	V22/22b
Dragon's Tower	081-202 0709	V21/22/22b
Dunedin Blackhole	031-669 2974	
Dwarfen Realm	0376 501036	V23v
Ebbs-1	0274 541156	V21/23/23v
Eddie's Bbs	0635 71324	V21/22/22b/23
Empirical Research	0543 675158	V21/22/22b/23
Empyrium	0792 580781	V21/22/22b/23
End To End	0376 84644	V21/22/22b/23
End Zone	0524 752245	V21/22/22b/23
Engineers Workbnch	051-327 7036	V21/22/22b
Eureka Gateways	0603 250689	V23/23v
Eureka li	081-683 0629	V21/22/22b/23
Exchange S/w	0767 5051	V21/22/22b/23
Eye-2	0525 715789	V21/22/22b/23
Fal Opus	0736 794827	V21/23
Falcon Bbs	081-527 4165	V21/22/22b/23
Family Skeletons	0480 812097	V22b
Fen Tiger	0954 210692	Rb V23v
Fido Uk1	0734 713909	V22/22b
Firm	0273 513872	V23v
Flight Path	081-759 1957	V22/22b
Focus International	0905 795002	
Focus Tbbbs	0303 42690	Hst
Focus Uk	0905 774477	V21/22/22b/23
Forth View	031-660 3474	V21/22/22b/23
Forum-80 Hull	0482 859169	V21
Fox's Den	0689 27085	V21/22/22b/23
Free Net One	0767 51972	V21/22/22b/23
Freelance Lynx	0480 406261	V21/22/22b/23
Friday The 13th	0642 224833	V21/22/22b/23
Fuzzy Logic	0634 200707	V21/22/22b
Gabbs	0705 524805	V21/22/22b/23

Gallery Qbbs	081-847 2795	V21/22/22b
Game Over	0752 848070	V21/22/22b/23
Games Online	0273 699200	
Gaslamp	0706 358331	V21/22/22b/23
Gaugonzola Bbs	0453 511112	24hrs/V21/22/22b
Gnome At Home	081-888 8894	V23v
Gods	081-994 9119	V21/23
Golly!	0734 320812	V21/22/22b/23
Goobtel	0602 706307	V21/23
Good Life	081-541 0187	Hst
Gopherit's Box	061-320-3208	V21/22/23
Gourmet	0474 536654	V21/22/22b
Grainstore	0905 770198	V21/22/22b
Grenadier	0825 762803	V21/22/22b
Hacker's Delight	0702 523853	V21/22/23
Halfwits Bbs	0272 340310	V22/22b
Hamnet	0482 465150	V21
Harlequin	061-945 3612	V21/22/22b/23
Hastings Bbs	0424 717919	V21/22/22b/23
Hawk's Castle	0344 411621	Hst
Hazzard Bb	071-737 0505	V21/22/22b/23
Health-data	081-986 4360	V23v
Heartbeat	0734 352032	
Hilary's Board	0277 233468	V21/23
Hot-air Opus	0579 70347	V21/22/22b
Humber Bridge	0482 850785	V21/22/23
Ichthus (trinity 3)	0734 461466	V21/22/22b/23
	0903 700771	V21/22/22b/23
Index Linked	0227 770403	V21/22/22b
Intel Ace	0832 73003	V23v
Islington Bbs	071-704 0760	Hst
	071-226 1248	V21/22/22b/23
It Contacts	0482 500286	
Jabulon Bb	0254 59352	V21/23/23v
Jersey Bbs	0534 37779	V21/22/22b/23
Jersey Opus	0534 39389	V21/22/22b/23
Jocks Away!	031-225 5368	V21/22/22b/23
Jolly Fisherman	0754 67796	V21/22/22b/23
Jolly Roger	081-742 1640	V21/22/22b/23
Jusavo	0324 32414	V21/23
Just The Place	0705 258694	Hst
K-wood	0608 83458	Hst
Kashmir's Bbs	0472 347882	V21/22/22b/23
Kernow Bb	0209 821670	V21/22/22b/23
Key-board	0908 668398	Hst
Keydata	081-676 0072	V23v
Kidlington Bbs	0865 56703	V21/22/22b
King Of The Castle	0233 620228	V21/22/23
Kirklees Opus	0484 665415	V21/22/22b/23
Kleopatra's Pyramid	0602 384281	V21/23/23v
Komputer Knidge	0844 274066	V21/22/22b/23
Kybermesia	081-673 7294	V21/22/22b/23
Labyrinth	051-724 4458	V21/23
Lamplight Qbbs	0705 811531	V21/22/22b/23
Laser Tbbbs	0532 438430	V21/22/22b
Lau'S Ql Bb	081-751 6096	Rb V23v
Lightfinger's Place	0202 485723	V21/22/22b/23
Linelight	0580 212043	V23v
Linx Bbs	0522 511277	V21/22/22b/23
Liquorice Allsorts	0633 279985	
Liverpool Mailbox	051-428 8924	V21/22/22b/23
Liverpool Ros	051-931 4271	V21/22/23
Loch lomond	0389 55762	V22/V22bis
Loft	0442 230461	V21/22/22b/23
Log On In Tynedale	0434 606639	V21/22/22b/23
London Bb	081-455 6607	V21/22/22b/23
London City Mag	081-468 7648	V21/23/23v
London Connexion	081-667 1313	V21/22/22b/23
London Embassy	081-366 1778	Hst
London Guest Hse	081-748 0974	Hst/V32
London Mail Centre	081-534 1200	V21/22/22b/23
London Metropolis	081-519 1055	V21/22/22b/23
London Underground	081-423 2233	V21/22/22b/23
Loony Bin	0703 787489	V21/23
Mabbs	021-444 8972	V21/22/22b/23
Mach II Bbs	0242 260 685	V21/22/V22bis
Mactel Hq (gm Box)	0602 455444	V21/22/22b/23
Mactel Metro	081-543 8017	V21/22/22b/23
Mactel Phoenix	0473 610139	V21/22/22b/23
Madness Bbs	0603 300947	V21/22/22b/23
Magic Castle Bbs	021-430 3761	V21/22/22b/23
Magic Mushroom	0361 83641	V21/22/22b
Magnum	0274 547006	V21/22/22b/23
Magrathea	0376 24402	V23v
Manor	0980 863031	V21/22/22b/23
Marcel	081-346 7150	V21/23/23v
Matrix	051-255 0225	V21/22/22b/23
Mbbs Leconfield	0964 550745	V21/22/22b/23
Mbbs Mitham lic	081-648 0018	V21/23
Medway	0634 280031	V21/22/22b
Mektronik Cnsltns	061-773 7739	V21/22/22b/23

Mercianet	0203 611943	V23
Merkinstead	061-434 7059	V21/22/22b/23
Merlin	0443 834179	V21/22/22b/23
Mgbbs	0443 733343	V21/23
Micro Live Bb	081-567 6500	V2
Micro Update	081-877 1529	V21/22/22b/23
Microdeal	0726 65422	V21/22/22b/23
Microlog	0422 71921	V21/22/22b/23
Microview!	081-509 0729	V23
Midget Gem	0748 834836	V21/23
Midnight Caller	0633 279243	V21/22/22b/23
Mind Boggles	0362 762868	V21/22/22b/23
Mininet 3	0642 672813	V21/22/22b/23
Miracom Support	0473 232540	Hst
Mirage	061-652 1242	V21/22/22b/23
Mirror li	0628 810889	V21/22/22b/23
Mirrorworld/quest 1	0883 844044	V23
Mission Impossible	0602 654329	Hst
Mk Board	0908 311005	V21/22/22b/23
Mkbbs	0908 504556	V22/22b
Monkey Tree	0952 677002	V21/22/23
Monusci	0293 545665	V21/22/22b/23
Motor Exchange	0484 435314	V21/22/22b/23
Multi-bbs	041-649 9043	V21/22/22b/23
Murdoch'S Hangout	021-711 2620	V22/22b
Murky Caverns	081-426 9386	Hst
Mwcfw	0926 421844	V22bis
My Little Phoney	0865 773277	V21/22/23
Nicc Mid-west	0341 250377	V21/23
Nite Life	071-976 6807	V21/22/22b/23
No Escort Required	081-200 3817	Hst
No.1 Bbs	081-958 1689	V21/22/22b/23
Norpac	0434 608324	V21/22/22b/23
North Wales Bb	0978 88372	V21/22/22b/23
North Yorks Qbbs	0423 868065	V22/22b/23
Northern Lights	0768 773685	V22/22b/23
Norwich Onion Bbs	0603 423305	V21/22/22b/23
Nova	0455 553371	V21/22/22b/23
Nova-net	0274 370760	V22
Odd-ball	081-679 2583	V21/22/22b/23
Open Access	081-427 3974	V21/22/22b/23
Optix	0482 872294	V21/22/22b/23
Organic Garden	081-464 3305	V21/22/22b/23
Out Of The Blue	081-668 7667	V21/22/23
Owl Service	0532 605876	V21/23
P'S & Q'S Tel	051-236 3105	V21/22/22b/23
Pacific Lightning	0732 845338	V22/22b
Packet Bbs	081-547 1479	V21/22/23
Packet Place	0484 435620	V21/22/22b/23
Palm Beach	0303 265979	V21/22/22b/23
Pazaz Viewdata	0383 620259	V23v
Pc Access	071-608 0081	V21/22/22b/23
Pc Forum	0322 335348	V21/22/22b/23
Pc Serve Shop	081-864 2633	V21/22/22b/23
Pc Serve Softnet	0895 420164	V21/22/22b/23
Pc Serve Storehouse	0494 728094	V21/22/22b/23
Pc-vax Opus	081-800-3549	V21/22/22b/23
Pcamiga Bbs	0602 735119	V22/22b
Peacenet West	0895 448988	V23v
Pecan Software Bbs	0272 248076	V21/22/22b/23
Penguin	0943 830820	V21/22/22b/23
Phantom	0226 340425	V21v/22v/23
Phoenix	0249 817704	Hst
Piston Popper	0424 853361	V21/22/22b/23
Plug-ole	021-472 0256	V21/22/22b/23
Plus And Minus	0559 322766	V21/22/22b/23
Poacher	0476 62450	V21/22/22b/23
Polynet Bb	071-580 1690	V21/22/22b/23
Port Of Call	081-391 5779	V21/22/22b/23
Power Play Qbbs	0698 423669	V21/22/22b/23
Power Tower	0533 880114	V21/22/22b/23
Prestonet	0772 612462	V23v
Project Bbs	0384 401770	V21/22/22b/23
Prometheus	081-300 7177	V23v
Proximity	0793 480028	V21/22/22b/23
Publishing Shop	091-261 5228	V21/22/22b/23
Purely Pc	0232 645942	V21/22/22b
Pyramid	071-239 0871	V21/22/22b
Pyroto Mountain	0895 59071	V21/22/22b
Really Interesting	0582 414991	V21/22/22b/23
Reflex Bbs	0703 685527	V21/22/22b/23
Regency Bbs	0542 33050	V21/22/23
Remotelpcw	0555 851887	V21/22/22b/23
Rivendell	0602 640488	V21/22/22b/23
Rim Tech. Support	0865 796431	V21/22/22b/23
Road Runner	061-483 4105	V21/22/22b/23
Roamer I	0292 45345	Hst
Royalink Uk	0962 66807	V21/22/22b
SAC Bbs	0242 260685	V21/V22/V23/V22bis
Sas Bbs	0742 325232 RbV	V21/22/22b/23

ATIVE SOLTION BBS

the 'Sheffield  
is on-line 24  
e selection of  
BC and NSX.  
Fmail, Email,  
dwide confer-

ences, includin  
What's more  
charge. It ope  
which runs the  
called *Turbo*  
Smith.



# Ladbroke Computing International



**All ST packs include 12 Months on site warranty featuring 24 hour response time.**

## ST Packs

520STFM Discovery Pack	£299.99
520STE Power Pack while stocks last	£389.99
520STE Turbo Pack	£389.99
1Mb STE Turbo Pack	£419.99
2Mb STE Turbo Pack	£499.99
4Mb STE Turbo Pack	£599.99

## Amiga Packs

A500 Batman Pack	£369.99
A500 Flight of Fantasy	£369.99
A500 Screen Gems	£369.99
Any of above + Tenstar + joystick + mouse mat	£399.99

## Service Centre

Our engineers can repair Atari ST's and Amigas in minimum time at competitive prices.

**Diagnostic service** £15

Our engineers will examine a faulty machine and provide an estimate of the full cost of repairing the machine.

**Fitting charge 1** £20

This is charged for the fitting of 1Mb and 2Mb board and chip memory upgrades, and 4Mb board upgrades for the STFM.

**Fitting charge 2** £10

This is charged for the fitting of SIMM's boards, TOS upgrades, Blitter chip upgrades.

**Star**

## Printers

<u>Star LC-200</u>		<u>Star LC24-200</u>		<u>Citizen Swift</u>	
New	<b>£219.99</b>	New	<b>£249.99</b>	Special offer	<b>£319.99</b>
7 Colour printer		24 Pin printer		24 pin printer	
Colour + mono ribbon supplied		222 cps		192 cps	
225 cps		5 Resident LQ fonts		Includes colour upgrade	
5 Resident NLQ fonts		Accepts font cartridges		Bottom feed	
Bottom feed		Bottom feed		Push or pull tractor feed	
Push or pull tractor feed		Push or pull tractor feed		4 LQ fonts	
Paper parking		Paper parking		Accepts font cartridges	
New	Star LC24-200 7 Colour	£319.99	All Star Printers carry 12 months on site warranty(Mainland UK). All printers include		
	Star Laser 8DB, 2Mb RAM	£1899.99	IBM Centronics cable. Phone for ribbons,		
	Star LC-10	£169.99	paper and printer stands.		
	Star LC-10 Mk II	£189.99	64K buffer 3 input switch		
	Citizen 120D+	£139.99	256K buffer 3 input switch		
			£79.99		
			£149.99		

## Monitors

Atari SM124 Hi-res Mono monitor	£ 109.99
Philips 8833 Colour, Stereo monitor	£ 249.99
Cmdr 1084S Colour monitor * limited offer *	£ 269.99
Philips 15" FST TV	£ 269.99
Philips 8833 + Tv tuner	£ 299.99

The Philips 15" FST TV includes: FST, remote control, Scart input, 60 tuner presets, sleep timer and Fastext. All above displays come with Scart cable. Deduct £10 from Monitors only, if bought with computer. The Philips 8833 comes with full 12 months on site warranty.

### Please Read: Terms of Sale.

We are the longest established Atari dealer in the U.K. We have developed an extensive customer service policy which means that we test all Hardware/Software prior to despatch to ensure that goods arrive in working order. Although our prices are not always the cheapest we do endeavour to offer consistently good service and backup. This isn't just our opinion, we were voted "Best Dealer 1989" by the readers of ST World magazine, not for "the number of boxes shifted", but for quality service.

**On Site Warranty:** We have recently extended our backup programme by including 12 months on site warranty with all ST's at no extra charge. We already offer this service on, All Star printers and Philips monitors.

All prices are correct at copy date 11/10/90, and are subject to change without prior notice. All prices are accurate while stocks last. Phone for up to date prices. All prices include VAT, there are no hidden extras (WYSIWYG). Delivery (in Mainland U.K.) is free, on orders over £100 (add £10 for next day courier delivery. All prices available on Mail Order. Shop prices may differ.

## Trust PC's

AT 12Mhz Desktop	£449.99
AT 12Mhz Mini tower 40Mb	£699.99
AT 16Mhz Desktop	£449.99
AT 16Mhz VGA Mini tower 40Mb	£749.99
386SX Mini tower	£629.99
386SX Big tower CK66 40Mb	£899.99
386SX-20 VGA Mini tower 40Mb	£979.99
386-25 VGA Mini tower	£1029.99
386-25 VGA Big tower CK66 40Mb	£1299.99
386-33 VGA Big tower CK590 40Mb	£1429.99
486-25 VGA Big tower CK590 210Mb	£3529.99
Mono Monitor	£99.99
VGA Colour Monitor	£299.99

Phone for further details

## Midistudio Master

- 100 tracks storage, 20 tracks playing simultaneously.
- 240 ppq resolution.
- Realtime mix-down via mouse.
- Realtime scrolling arrange window.
- 11 levels of quantise, including humanise.
- Pipeline/Module system.
- Loop record.
- Midi soft keys.
- Works on 1040STF(M)(E)

**Master  
£129.99**

Midistudio only £49.99

## CUMANA 3.5" Drives

CSA 354: ST 3.5" drive.	£69.99
CAX 354: Amiga 3.5" drive.	£64.99
ST Internal drive upgrade.	£64.99

The Cumana, ST internal drive requires the ST's case to be modified (full instructions supplied). The external ST drive is a high quality, slim, quiet drive which comes complete with integral power supply and so does not draw power from the ST which could cause problems. Add £3 P&P for drives.

## Lantech Netwk

We are the U.K. Distributor of the Lantech Network

- Uses Cartridge port.
- 10 Megabit per second data transfer rate.
- Up to 200ft between ST's.
- Any computer can be configured as a server to share, Hard, Floppy, RAM disks and Centronics printer.

Lantech server and node **£374.99** Lantech Add-on-Kit **£179.99**



# Kawai Fun Lab Music System



## Amiga MIDI interface

1x MIDI IN  
2x MIDI OUT  
Colour matched to Amiga

## Keyboard FS680

- 61 Full sized keys
- 100 preset sounds
- 16 bit PCM quality
- 100 preset rhythms
- 32400 sound combinations
- ONE-FINGER AD-LIB
- 2x Stereo speakers
- Effects: Chorus, Sustain, Pitch up/down
- 2x MIDI cables

## Amiga Software

- 5 Track sequencer
- 5 channel mixer
- Quantization
- Left/right locator
- Auto loop
- Graphic notation
- Lyrics(KARAOKE)
- Registration page
- Synthesizer editor

Funlab Music System for Amiga including: MIDI Interface, FS680 Keyboard, Midi cables and software.

**For Amiga £330**

Kawai Music system for ST including FS680 keyboard, MIDI cables and Midistudio sequencer software.

**For ST £330**

Funlab Junior is available for the Amiga priced £230.  
Phone for details.



## Hard Drives

*We use only top quality, brand new, CDC or Quantum mechanisms. Not reconditioned mechanisms.*

- ☐ Autoparking 3.5" mechanisms.
- ☐ Extra long DMA.
- ☐ Full metal case suitable as monitor stand.
- ☐ On/off button and DMA device selector mounted on front.
- ☐ Integral PSU.
- ☐ DMA Out port for daisy chaining.
- ☐ Megadrive controller, low power, controls up to 8 SCSI drives.
- ☐ Compatible with emulators such as Spectre GCR, AT Once.
- ☐ Up to 14 GEM partitions (255 with TOS 1.4), up to 1 Gigabyte in size.
- ☐ Selection of Accessories/boot partition with boot editor.
- ☐ Backup & utility software provided.

*New Prices*

42HD - 42Mb 11ms access time **Only £ 479.99**  
48HD/28 - 48Mb 28ms access time **Only £ 399.99**  
84HD - 84Mb 24ms access time **Only £ 579.99**  
111HD - 111Mb 15ms access time **Only £ 699.99**  
211HD - 211Mb 15ms access time **Only £ 1099.99**

Phone for other capacities

## A4 Scanner

- ☐ 200 Dpi scanner.
- ☐ 16 grey scales or Black/White mode.
- ☐ High quality thermal image printer.
- ☐ Acts as photocopier.
- ☐ Works with ST, Amiga, PC, requires 1Mb RAM.
- ☐ Amiga version includes Photon Paint II.
- ☐ Comes complete with software, cable, thermal paper.
- ☐ Thermal paper available ex-stock at £7.99 per roll.

**IMG scanner still available at an incredible £49.99**

## ST FAX/Modem

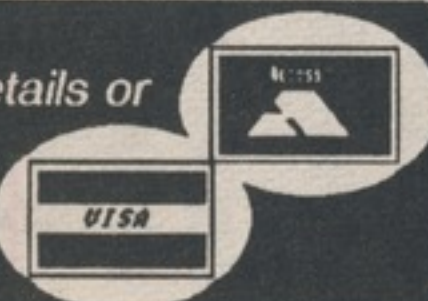
Now you can use your ST to send faxes. Uses a fully featured modem so you can also access Bulletin boards and commercial communication systems.

- ☐ Fully Hayes compatible modem
- ☐ Auto dial/ Auto answer
- ☐ 300/1200/2400 Baud
- ☐ Mix text and graphics.
- Cannot receive faxes.

**£190**

### How to Pay

You can phone your Access or Visa card details or send a cheque/postal orders made payable to Ladbroke Computing International. Please allow sufficient clearance time for cheques.



33 Ormskirk Road, Preston, Lancashire, PR1 2QP Open Monday to Saturday 9:00am to 5:00pm. Dealer enquiries welcome. Ladbroke Computing International is a trading name of Walton Marketing Limited. All trade marks recognised.

*New Prices*

## Upgrades

### Amiga boards

Includes Enable/Disable switch

512K upgrade board £34.99

512K board with clock £39.99

### STE SIMM's

512K SIMM's upgrade £39.99

2Mb SIMM's upgrade £119.99

4Mb SIMM's upgrade £239.99

512K STFM, 16 or 4 chip kit £ 39.99 512K ST board+chips, kit £ 59.99  
2Mb ST board+chips, kit £ 159.99 4Mb ST boards+chips, fitted £ 344.99  
TOS 1.4 kit (6 ROM's) £ 39.99 STFM Blitter chip, kit £ 39.99

Please check configuration of your machine with our staff before ordering. Prices quoted for machines not previously tampered with. All upgrades carry 90 days parts and labour guarantee.

## Spectre GCR

"Power of the Mac, without the price."

- ☐ Reads, writes and formats Mac disks.
- ☐ Supports Hard drive and second floppy.
- ☐ Compatible with STE, Stacy.
- ☐ 30% bigger screen area than Mac Plus.
- ☐ Runs 20% faster than Mac Plus.
- ☐ Software upgrades available.
- ☐ Send SAE for Spec' sheet.

Spectre GCR  
With 128K ROM's

**£369.99**

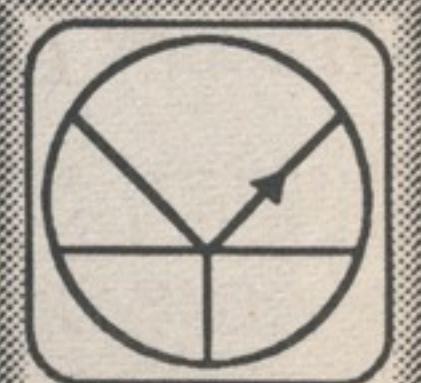
We are the consistently longest serving supplier

## Quality Disks

Qty	Bulk Sony or Kao		Sony Brand Boxed in 10's
	Loose	Boxed	
10	£ 5.99	£ 6.99	Includes x10 Ryford black plastic box £ 9.49
40	£ 20.99	£ 26.99	Includes x40 Lockable, disc box £ 34.99
100	£ 48.99	£ 57.99	Includes x100 Lockable, disc box £ 84.99
150	£ 66.99	£ 83.99	Includes x150 Posso Stackable disc box £ 125.99

All bulk disks are top quality Sony or Kao, not cheap seconds. All disks carry an unconditional lifetime guarantee. Please add 75p P&P for each 10 disks, £3.00 for 100 and above.

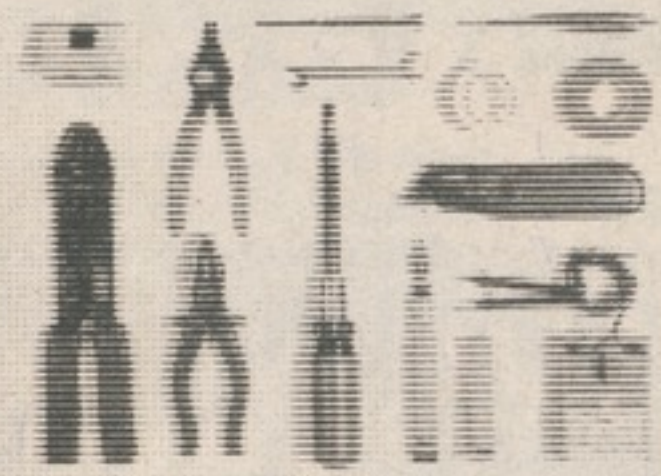
**Ladbroke  
Computing  
International**



**(0772) 203166 Fax 561071**



# CIRCUIT CITY



Planning, designing and constructing a project for your computer could leave even the cleverest scratching their heads. This week Keith Pomfret looks at some kits and projects that you can buy off the shelf.

Anything's possible and a glance through this year's Maplin Catalogue (the Circuit City bible) offered everything from a Geiger counter to a Star Wars LASER. These two projects are exciting, but not of a lot of practical use unless you're planning a holiday to Kiev or a job on Battlestar.

In among the coherent light and clicking counters there were several projects that attach directly to a computer and/or have practical uses. I've weeded a few out for your perusal and later in the series, I'll be getting out my soldering iron to tackle them.

Drop a postcard this way to let me know which ones you'd like to see in more detail.

For now, we'll have a look at what's there and what it could be used for. Before you take on any of these projects though, be warned: it's very rare to start and finish them in one session.

Ideally, you should have some workbench or flat area where your project won't be disturbed if you have to break for meals/sleep/work or any of the other annoying things that life places in the way of fun. The kitchen or dining room tables are a bad bet as people tend to want to eat off them when you are at a critical point. For all their use as tasty troughing, marmalade, minced-meat and Marmite don't make good flux for your solder.

If you have to work on a temporary surface, plan well ahead and be 'clear' before the steaming casserole is dumped unceremoniously on your PCBs.

Once you've sorted out your workspace, pick a project within your abilities and plug in your iron.

## PROJECTS ON OFFER

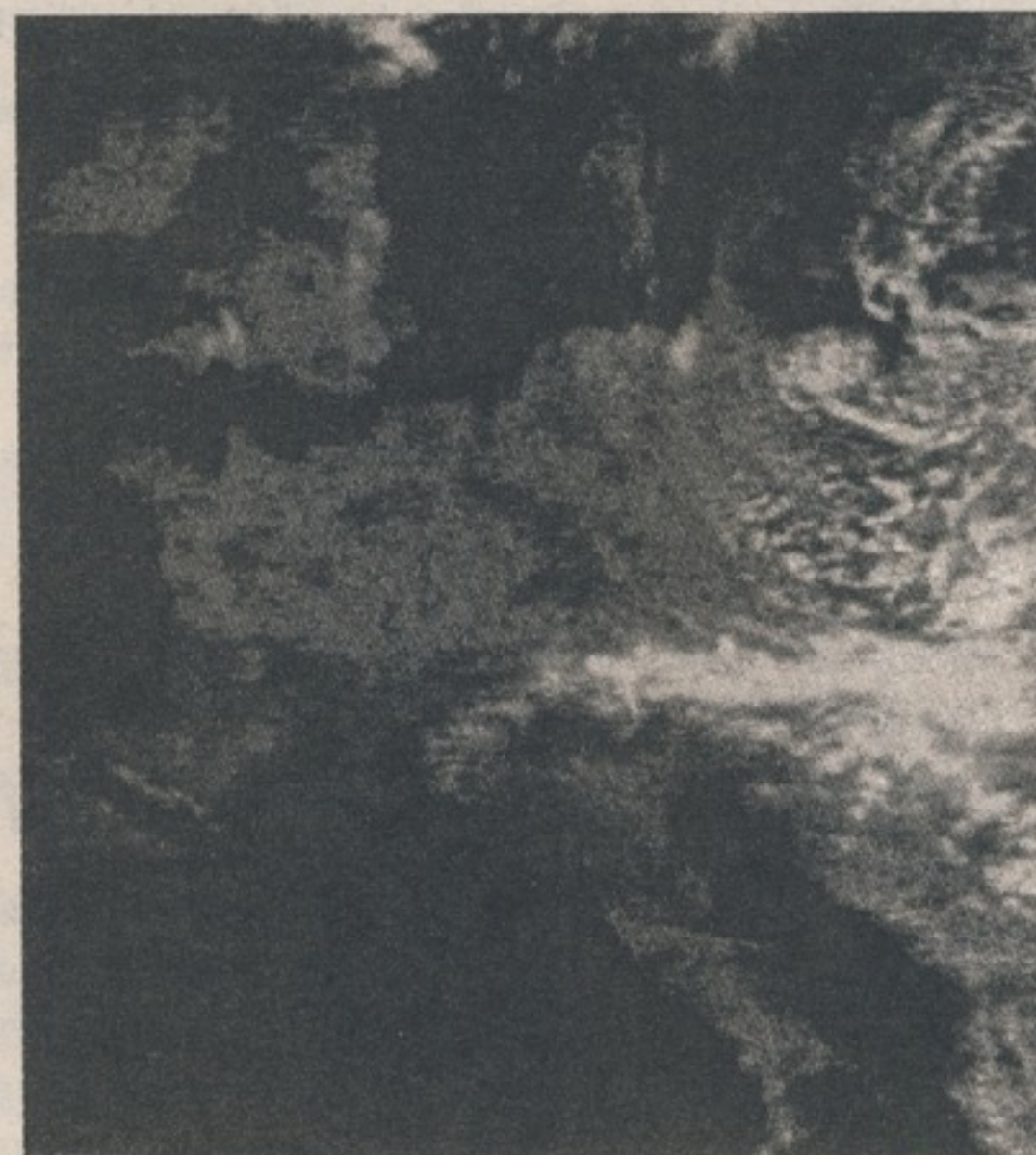
### VCR Dubbing and changeover kit.

This was originally designed with the home video enthusiast in mind as a simple way to dub video from VCRs and Camcorders. But with multimedia peeking around the corner and many people already grabbing video digitising by the horns, it is a useful way to control all of those signals without constantly changing leads.

Connections are via standard Scart plugs and up to three machines (two source, one output) can be connected simultaneously.

### TEA2000 PAL Colour encoder.

Colour and timing inputs are encoded in this unit. The output result is either a composite video signal for direct



• *Eye in the sky - weather information from satellites can be read and loaded on to a standard TV set or imported into a home computer for more permanent storage.*

connection to a monitor or an RF modulated frequency to allow direct connection to a TV.

### 1.2kw Power controller.

This is a standard power socket with circuitry to control power levels. It works in a similar way to a dimmer switch on a lighting circuit and can handle loads of 720w. It is an ideal power supply for a soldering iron,

giving precise control over the temperature. It will also work as a speed control for power tools such as drills (not electronically controlled devices though).

### 220/240v inverter.

This clever little box takes the power from a car battery, inverts it from direct current to alternating current and transforms it to mains voltage at 220/240v. Although you cannot expect a car battery to run a list of mains appliances for long, it is a useful device that can help in times of a power cut and allow you to use your desktop computer away from the mains (on caravan or boat etc). In a situation where there's a constant charge to the battery such as in a moving vehicle, it will provide constant power to run appliances. (This is how many of the cross-Europe coaches manage to run freezers, microwave ovens and video films.)

### Digidice.

This isn't of any great practical use, but it's a simple kit, easy to make and is good practice for the beginner. The kit electronically generates a pseudo-random number in the range 1-6 and displays it in a dice-like form. Push a button, get a number. It's as simple as that.

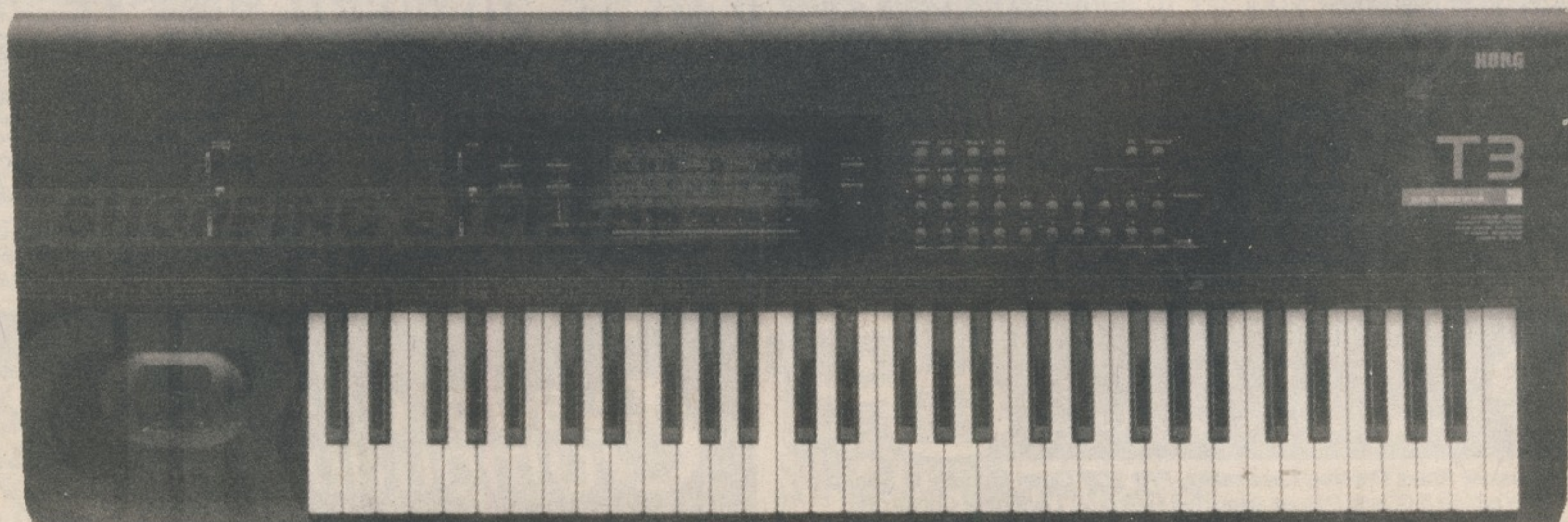
### RTTY unit.

This takes RTTY signals (Radio Teletype) and decodes them into a standard RS232 type signal. In order to use this kit, you need a short wave communications receiver.

Radio Amateurs use RTTY to send messages via radio and avoid the cost of the huge phone bills that can come from telephone modems. Using the RTTY unit, a suitably equipped computer and a short wave comms receiver, you can eavesdrop on the RTTY world. If you have the requisite licence and transceiver, the RTTY unit allows you to transmit as well as receive.

### Amplifiers and Speakers.

Whatever computer you use, you could probably benefit from amplifying the audio output. Whether you have a simple mono or full spatial stereo output, the use of a proper amplification setup will surely enhance the quality. Even the PC, with its impotent beep, can benefit. Soundcards have allowed the PC to sing and growl with the rest of them. Pick the right speakers and amplifiers



• *The Korg T3 music station accomplishes digital processing to ensure high quality sound synthesis and easily connects to the Maplin MIDI thru box.*





• Amstrad's new CPC 6128 Plus is compatible with the CPC expansion system via a simple connector.

for your location. There'd be no point in running a 1000 watt sound rig in a boxroom, nor a pair of walkman speakers in a ballroom. Pick wisely and watch *Circuit City* for computer audio connections soon.

## MIDI thru box.

If you're planning a MIDI set-up, this kit must be first on your list of wants. It offers an opto-isolated input and eight buffered MIDI outputs. This means that if you want to connect several modules, a computer and a MIDI keyboard, they can all connect to the same box instead of being 'chained' together in a linear fashion. This prevents MIDI lag and dropout, the two biggest problems of running a multi-MIDI set up.

## Live Wire and Metal detectors.

These two simple-to-make probes are useful tools to have around. The live wire detector will tell you whether a circuit is live whether or not there's current flowing. This is done by proximity so there's no necessity to actually touch anything potentially dangerous to find out if it's live. The metal detector can tell you if there are any mains pipes or studs lying in wait under the surface of the spot where you want to put up a shelf or bracket.

## Mini Lab Power Supply.

This complex kit gives fixed and variable 'bench' power supplies for testing your projects and driving equipment under test. It's a difficult project to undertake, but will

pay rewards and dividends in its usefulness. It supplies 5v, 15v and 12v fixed and a variable 3-20v output. Many other features make it the most desirable piece of equipment on this list.

## Logic Probes and testers.

Getting into the realms of the technical, if you need one of these, you won't need an in depth description of what it does but simply, the probe offers an alphabetical display of a single letter (H for high, L for Low, F for floating, P for pulsing). The Logic IC tester is a PC board with software to allow the full logic testing of any of the standard TTL and CMOS logic chips up to 20 pin DIL.

## MAPSAT Weather satellite receiving system.

This unit is designed to read the weather information currently being beamed to the earth by several satellites. The data can be saved to standard cassette tape and then either loaded onto a TV screen for viewing or imported into a home computer for more permanent store, display manipulation and display.

The American TIROS-N series of satellites and the Russian Meteor and Cosmos Satellites can be received in the UK. There are several modules to make up the full kit so this project should be looked at as an ongoing long term job.

## Amstrad CPC expansion system.

The popular Amstrad CPC series of computers was blessed with a 50-way expansion port that was just itching for peripherals. Over 250 pieces of ROM software can be paged into the CPC, some foreground, some background. The Amstrad Expansion System starts with an external ROM expansion unit which will hold up to eight 27128 ROMs or EPROMS. An external controller card and motherboard allow the addition of I/O ports and a fully illustrated booklet contains complete construction and instruction details.

## NICAM TV stereo sound system.

With Multimedia, TV insert and sound and picture sampling becoming more popular, the advent of digital sound for broadcast programs means that there's yet another digital source to add to the list of computer processable media. The NICAM sound system will allow you to receive and process digital broadcast sound without the expense of a NICAM TV receiver.

## LASER.

When someone first shot the output of a gas discharge lamp into a cylinder of synthetic Ruby in the 1950s and

the result was a beam of coherent light, the scientists clamoured around and the LASER beam then became the prima donna of the scientific world, light years away from any kind of home application. An early *James Bond* film cast the LASER as a death ray and it took until the 1980s for anyone to harness it to a domestic application. Nowadays, you can expect to find a beam of coherent light in a portable CD player and the beast is truly tamed.

The LASER kit is a little bigger than the CD-sized module, but is a simple domestic kit that can be built by the average home electronics hobbyist. A controller is also available to reflect and refract the beam through and from rotating mirrors to give a pleasant pattern of moving light on a wall or through mist or smoke.

## Geiger Counter.

You'd better hurry if you want your own personal Geiger-Muller counter as it's due to be discontinued this year. It's a simple kit for all but the most clumsy DIY person and as well as detecting the nasty Gamma and X-Rays, will also detect Alpha and Beta particles.

It is fully portable, works from a 9v battery and accessories such as a geiger remote probe are available. To make life even simpler, there's a project book available to guide you through the construction.

Finally, the Geiger counter and Laser kits are available at 99.95 (Diff 2) and 99.95 (Diff 3) respectively. So there you are. 200 and you're prepared to do battle with a laser on your shoulder (don't stray far from the mains though) and a Geiger counter to guide you through the vast nuclear wastelands . . . May the force be with you and all that. ■

## SIMPLE, ISN'T IT?

The kits are graded by Maplin in difficulty from 1-5:

- 1 - Suitable for absolute beginner.
- 2 - Easy to build but may need test gear and setting up.
- 3 - Average. They require skill in construction and setting up.
- 4 - Advanced. May require specialist gear to set up and test.
- 5 - Put on your protective gear, these ones are totally wicked and complicated.

MAPLIN is on 0702 554161

## WHAT'S THERE AT A GLANCE

<p>● 220/240v Inverter Price £64.95 Difficulty 4</p> <p>● Digidice Price £9.95 Difficulty 1</p> <p>● RTTY Unit TU1000 Price £54.95 Difficulty 4</p> <p>● Loudspeaker Kits Price Varies Difficulty 3</p> <p>● Audio Amplifier kits Price Varies Difficulty 1-5</p>	<p>● 8 Way MIDI thru' box Price £19.95 Difficulty 3</p> <p>● Live Wire detector Price £3.95 Difficulty 1</p> <p>● Mini metal detector Price £5.25 Difficulty 1</p> <p>● Mini Lab Power supply Price £39.95 Difficulty 5 (OUCH!)</p> <p>● CMOS Logic probe Price £12.95 Difficulty 3</p>	<p>● Logic IC Tester (PC card) Price £69.95 Difficulty 3</p> <p>● Amstrad CPC expansion system 8ROM card with throughport Price £44.95 Difficulty 3 Booklet to go with above £1.50</p> <p>● Spectrum Easyload (Tape load utility for Spectrums with separate tape recorder) Price £11.95 Difficulty 2</p> <p>● NICAM Stereo TV sound system Price £139.95 Difficulty 4</p>	<p>● VCR Dubbing and changeover kit Price £59.95 Difficulty 2</p> <p>● TEA2000 PAL colour encoder Price £19.95 Difficulty 5</p> <p>● 1.2kw Power controller Price £20.95 Difficulty 3</p> <p>● MAPSAT weather satellite receiving system Price £74.95 + £11.45 for the aerial Difficulty 3 There are several more modules necessary to produce a complete weather station.</p>
---	---	--	--



**Silent Fantasy • Amiga • Lorenzo's Domain • Disks 218A & 218B**

Are you any good at art? I know I'm not, and am insanely jealous of anybody who shows the slightest inkling of being able to draw anything above the quality of the Mr Men.

So when I looked at the 'Silent Fantasy' slideshow I was pulling my hair out with rage. It's a disk filled with pictures of the most astounding quality.

The piccies are drawn in the Amiga's low resolution 32-colour mode. The digital drawings are very much in the vein of the airbrushed illustrations you find on the covers of science fiction and fantasy novels - in both quality and subject matter. You know the sort of thing: strange alien landscapes and weird mythological creatures. And of course the odd scantily clad female - after all, a disk like this wouldn't be complete without them, would it?

The collection comes on two disks. There are dozens of pictures to goggle at. Each has a separate piece of text that scrolls along at the bottom of the screen. It's not really all that informative, telling you how mega cool the artist responsible is, rather that anything about the picture in question. Many of these messages are in Danish (or some similar language) so they're even less informative. Music plays merrily away at the same time as the pictures are displayed. Just the thing to show off the

# THE PD COLUMN

**There's a wealth of free software out there which is yours for the price of a disk. Our PD man, Adam Waring, takes a look at what manner of wonderous freebies are on offer this week...**

immense graphical capabilities of the Amiga to the amazed gasps of your friends.



• *Fantastic artwork from the Silent's slideshow*

**ST News 5.1 • ST & STE • Sphinx Software • 1Mb and D/S drive required**

A new magazine has just appeared for the dear old ST, with a startling original name. *ST News* is a magazine on a disk all about the ST scene. Across the top of the screen the sections of all that's on offer is listed.

The information is split into logical categories. There are sections on reviews, news, features and other ST related bits and pieces.

All the copy can be read through the special reader program provided. It's easy to use, and boasts an immensely irritating tune that can be turned off - thank goodness.

It's well written, and quite informative. Unfortunately 5.1 is the last ever version of the newsletter, so it's a case of buy now or never!

**ST Sheet • ST • Sphinx Software • Uti 67**

You must know the situation. Maths are not everyone's strong point and sometimes those figures just don't add up, in which case it is no laughing matter - especially if you have this year's



• *It's Dobbins the flying horse, another surreal creation from the slideshow.*

## Lorenzo's Domain Amiga P.D. & Shareware

**A SMALL SELECTION FROM A GREAT COLLECTION****MUSIC**

- 101: Definitive Docklands by H.C.C.: Fantastic colour pictures and music
- 102: Lorenzo's music utility disk: Rippers and Players galore
- 103: Digital Concert no 4: by Flash Productions
- 104: Lorenzo's musical delight
- 105: Future composer
- 106: Noise Tracker Collection (3 disks)
- 108: Free'd out by the Crusaders
- 109: Flash by Queen: (2 Disks)
- 111: Rave Demo (1 Meg) by H.C.C.
- 113: Dmob Music Demo No 2
- 114: New music demo by H.C.C.

**DEMOS, INTROS & MEGADEMOS**

- 204: 8 radical demos by Abandon, Cave, Dual Crew, Kefrens, Mahem, Vision etc
- 205: The Dexion Megademo: Cooooool stuff baby
- 206: 5 major demos including: The Revenge Of Babbnassen, Cebit 90 by Red Sector
- 207: 6 of the best including: Follow Me by Red Sector, Celtic, T.P.L etc
- 208: The CryptoBurners: Megademo 2
- 209: Scoopex: Mental Hangover
- 210: Alcatraz: Megademo 4: (3 disks)
- 211: Outsiders: Acid Demo
- 212: The Kefrens: Megademo 8 (2 disks)
- 213: The Dragons Megademo
- 214: The Silens Megademo
- 215: The Predators Megademo (2 disks)
- 218: The Silents: Fantasy: (2 disks) great pictures
- 219: Bacteria: The Crusaders
- 220: Collection of intros including Trip to Mars and Meg Zarjaz
- 221: Popeye Meets the Beachboys: It's ravin mad pal.
- 222: BudBrain Mega Demo X (2 disks)
- 223: Deathstar Mega Demo (2 disks)
- 224: H.C.C Toxteth Demo: Hilarious
- 226: Freddy Krugar Rap
- 227: Mindwarp Megademo Vol II
- 228: Robocop demo.

**GRAPHICS PICCY'S AND ANIMATION**

- 300: Graphic Slideshow by The Dark Wizard
- 301: IFF Picture Show
- 304: Fish 295: Mandel Mountains
- 305: Lorenzo Graphic Utilities

**306: Newtek Demo Reel 3 (1 Meg) (2 disks)**

307: Luxo Teenager animation: (1 meg) : A very good animation of a desk lamp

308: Nightbreed Slideshow by H.C.C: These are the best pics I've seen yet.

309: Forgotten Realms Slideshow by Fraxion

311: Viz Slideshow: 12 Great digitised pics from VIZ 1990 Calendar

400: Puggs in Space by Dionysus: Great anims and Brill music.. Yeehaa

403: Agatronic Slideshow: More great stuff from Tobias Richter

404: Magician & Runner: Very good

405: Agatronic Anim £25: The Run (1 Meg) Could be his best yet

407: Walker 1 Animation (1 meg). Been around for a while. A classic

408: Walker 2 Animation (1 meg). Yep! You got it, another classic

412: The Education of Cool Cougar (1 meg): Brilliant

413: The Probe Sequence

414: Space Ace Demo: (1 meg) Animation Sequence from game

415: Fillet the Fish Animation by Jester Bros International

**GENERAL**

500: Jazzbench: Jazz up your workbench

501: Fonts Disk: Loads of fonts

502: Wordprocessor

503: Spreadsheet

504: Database

505: Ghostwriter and Rainbowriter: Intro Writers

506: Dope Intro Writer

507: Virus Killer disk

**GAMES**

700: Lorenzo Games Collection 1: Old faithfuls

701: Fish 347: Drip Game: Pure dead brilliant

702: Star Trek 3: (2 disks) :absolutely fantastic

703: Return to Earth

704: Blizzard Game

705: Monopoly

706: Star Trek (1 meg) (2 disks)

707: Paranoid: Arkanoïd like game with its own screen editor.

**ALL DISKS  
99p  
each**

**ONE DISK FREE WITH EVERY 10 ORDERED PLUS EXTRA SURPRISES**

No membership. FREE catalogue with every order. When you choose from Lorenzo's Domain you can be sure of getting the best VIRUS FREE P.D. around. We aim to have your order back in the post within 2 hours. Send your order with a cheque or P.O and 50p towards p&p to:

**LORENZO'S DOMAIN  
30 COLQUHOUN SQUARE, HELENSBURGH, G84 8AQ**

**AMIGANUTS  
UNITED**

OFFICIAL U.K. DISTRIBUTORS  
OF THE FANTASTIC T.B.A.G.  
DISKS FROM MERLIN U.S.A.  
FOR ONLY  
£1.80 EACH

LIBRARY PRICES START AT  
ONLY £0.50p (WITH DISK)  
NO MEMBERSHIP CHARGES  
NOW INTO OUR 4th YEAR

- 521:** ALL NEW STAR TREK, with AUTHORISED English instructions. (2 DISKS) £4.00
- 639:** C MANUAL by Anders Bjerin. A three disk set, containing 200 pages of instructions on opening windows/screens/graphics/gadgets/sprites etc. Loads of examples/source progs. (FULL KNOWLEDGE OF THE CLI IS REQUIRED). £6.00
- 649:** BUDBRAIN. Excellent TWO DISK MEGADEMO. (FOR ADULTS ONLY) £3.00
- 640:** 8 GAMES. The train set game makes this one a MUST for the kids. £2.00
- 680:** WORD SQUARE SOLVER - Solve magazine puzzle squares with this one. £2.00
- 681:** AMI-FX ISSUE 1 - Special three disk set for fractal enthusiasts. This series will be arriving on an infrequent basis. (1 MEG MIN) £5.00
- 699:** FRANTIC FREDDIE. A C64 conversion by Bignonia Software + TWO DEMOS £2.00
- 700:** TETRACOPY. An EXCELLENT copier program by the team that did XCOPY £2.50
- 705:** AMIBASE PROFESSIONAL. A new Database prog. by K. Grant. (LICENCEWARE) £2.50
- 706:** 3 NICE GAMES by PH Software. THE TURN, TRICKY AND MARBLE SLIDE £2.50
- 717:** MUSIC DISK with 53 tracks lasting OVER 90 MINS! (A MUST) £2.00
- 728:** THE EXCELLENT BOOT-SHOP, plus ifmaster, bootkit, diskscan etc. £2.50
- 740:** MED V2.13. The VERY LATEST version of this FANTASTIC music utility has been re-vamped with a host of new additions, with arced samples. £2.50
- 741:** NorthC V1.2. Updated version from Steve Hawtin, this new set comes on TWO DISKS and is packed with extra progs/examples/advice on bugs. £5.00
- 755:** SUPER C COMMANDS DISK from Twilight (FAST REPLACEMENT C DIR PROGS) £1.50
- 756:** PSEUDO-COP. A very hard to play PD game, very well done. £2.00
- 759:** The FANTASTIC Crionics Auto-run demo called 'NEVERWHERE'. £1.50
- 760:** Letter writing disk by GRIZZLY, set up and ready for your letters £1.50
- 790:** PROFESSIONAL SOUNDTRACKER V1.0 is here!, it is EXCELLENT, just press the HELP key, whilst running, for full instructions. Disk also contains latest Ntracker V2.12, subtitled THE STARTEKKER by Exolon of Fairlight, also the FINAL version of DISKMASTER (V3), A 100% CLI REPLACEMENT TOOL. £2.50

AT LAST! HERE IS A NEW DISK THAT ALL CODERS HAVE BEEN WAITING FOR.

**ACC-1/4:** The first 4 compacted issues of a new disk for coders, even if you are new to the coding, it's the one to get if you intend using devpak. Advice/source and more. Edited by Mark Meany. INTRODUCTORY OFFER £1.50

OCTOBER COMPETITION ISSUE CATALOGUE DISK IS NOW AVAILABLE. YOU COULD WIN £100 WORTH OF PROGS. (3 PRIZES). SEND £1.00 AND ASK FOR YOUR COPY NOW!!

SORRY, TO KEEP OUR PRICES AS LOW AS POSSIBLE, WE DO NOT ACCEPT CREDIT CARDS.

ALL PRICES QUOTED ABOVE INCLUDE RETURN POST AND PACKING

**Make cheques/Postal Orders payable to: AMIGANUTS UNITED**  
169, DALE VALLEY RD, HOLLYBROOK,  
SOUTHAMPTON SO1 6QX. PHONE 0703 785680  
PLEASE NOTE: Some demos contain language that may be considered offensive.



accounts to finalise. In the event of this unhappy scenario, *ST Sheet* could well be a blessing. It's a public domain spreadsheet, and a very fine one at that. A spreadsheet, by the way, is a program that can work out masses of crossed referenced mathematics in an instant.

It's ideal for those 'what-if' scenarios. It's useful for small businesses and the home alike. It'll help you work out how much you could cut the price of your range of designer anoraks by and

still stay in the black. Alternatively, you could juggle some fiscal figures about and attempt to conjecture exactly how paying the poll tax is likely to affect your beer money. As with most things of this kind, it all depends on your financial imagination.

Basically the system goes like this. You have a huge work-sheet at your disposal. It's spilt up into rows and columns of individual cells. Each cell can contain text, numbers or calculations. The vari-

stored in archived format so you'll need to run it through the supplied de-archiver first. There's plenty of in-program help at hand too. If you get stuck then simply click on the help menu and you'll soon be set put right, it covers most foreseeable faults.

There are plenty of powerful features in the program that both enhance and facilitate your usage. There's a simple programming language built in. Graphics facilities, a useful indeed necessary addition, are provided too. So you can see just how the figures will look, without having the bother of getting out the graph paper and felt pens and drawing it yourself.

And that just about sums it up.

#### PD News

A couple of issues ago (*Express* 99 to be precise) I told you about the amazing games collection from Capricorn Computers - called CC games 22.

Many of you were suitably impressed by the write-up and sent off your cheques to Capricorn - causing much confusion. So why was this then? Well silly me, I went and got the numbers all mixed up, grotesque imbecile that I am. It should have read Disk 336, not disk 366 as stated. Whoops and a thousand apologies!

Capricorn is located at 35 Warick Road, Olton, Solihull, West Midlands B92 7HS.■

#### GET IN TOUCH

Do you run a public domain library? If you do then we'd like to hear from you. Simply send us a sample of your software and we'll do our very best to include you in the next available PD column.

Don't worry about the fact that it's on the Sam Coupé. We cater for all tastes here, and can load virtually anything you send us.

Do make sure that you enclose all the necessary details. Instructions for the program would be helpful. Things like the name of your library, your prices and address are pretty useful too. Include your phone number in case we have a query about your software. We won't print it if you don't want us to (ie you run the library from your mum's house), but if that's the case then make sure that you state so clearly. If you have a catalogue, bung that in too.

We're always on the look-out for other PD related stuff. So next time you send something in, why not include a chart of your best selling titles, or anything newsworthy will get a look in too.

Send it to: Adam Waring's PD Column, *New Computer Express*, Future Publishing, Beauford Court, 30 Monmouth Street, Bath BA1 2BW.

#### WHERE TO GO

• **Lorenzo's Domain**, 30 Colquhoun Square, Helensburgh, Scotland G84 8AQ. This Amiga library has a very 'clubby' feel. Competitions are run regularly, and they aim to send out your disks within a couple of hours of receiving your order. The disks are dirt cheap too. The princely sum of 99 pence is all it costs for a disk full of delightful PD.

• **Sphinx Software**, Erw Fynydd, Carmel, Llanelli SA14 7SG. Sphinx have loads of stuff for your ST. Prices are fairly reasonable at your standard £1.50 for a single sided disk, and £2 for double sided. What's more if you supply the disk the price plummets to just 50 pence for singles, and a quid for doubles.



• Another friendly looking pet from the the slideshow There are many, many more in a similar vein.

ous functions are accessed via the menu bar which lies across the top of the screen. There are hot keys too for those who become adept at using the system.

If you've never used a spreadsheet before then fear not. There's a chunky comprehensive manual on the disk. It's

Venus 95%

The Games Machine

BSS Jane Seymour 91%

C&VG



Ultimate Golf 97%

Your Amiga

Lotus Esprit 94%

C&VG

Gremlin: 'Stronger than ever' ST Action

'Venus sets a newer, higher standard in ST software' ST Action

Gremlin's 8 bit Shadow of the Beast: 'An awesome achievement' C&VG.

'Lotus Esprit Turbo Challenge has arrived, and nothing will be the same again' C&VG

Fancy working with the most consistently excellent software house around? Now's your chance. Gremlin are looking for programmers and graphic artists on all formats to join our successful in house team, who have been described as possessing 'flair, ingenuity and sheer skill' in the computer press. If you can match the impressive standards that Gremlin expects, we want to hear from you. We can offer excellent salaries, brilliant working conditions in our new offices, and a Ferrari for anyone replying within a week.\* We are also interested in developing freelance projects with experienced or new development teams. If you are interested in working for a company that prides itself on quality before quantity, then contact James North-Hearn or Sean Kelly at:

Gremlin Graphics, Carver House, 2-4 Carver Street, Sheffield, South Yorkshire. S1 4FS. Telephone 0742 753 423.

\* The Ferrari bit isn't strictly true. It isn't even slightly true. Actually, it's a lie. Sorry about the duff design, but we concentrate on quality games, not adverts.



# **AUVIAN TECHNOLOGIES**

386 16Mhz vertical floor standing case  
super VGA card + VGA colour monitor +  
2 x FDD + DOS + 40Mb hard disk .

**FREE DELIVERY,  
FREE WORD PROCESSOR  
AND**

**FREE Supercalc.**

**Cost £1150.00**

**IRLANDEX  
150 Appleton Park,  
Finaghy, Belfast, BT11.**

**Tel: 0232 600075  
Fax: 0232 664357**



Christmas is coming. That can mean only one thing – the licence merry-go-round is spinning faster than ever. This year many of the smaller companies are also picking up attractive licence deals to compete with the big boys. US Gold and Ocean still have their *ESWATs* and *Robocops* but the small fry's hitting back hard. Entertainment International has both *Spiderman* and *Dick Tracy* in its grasp, not to mention a Gazza title.

UBI Soft has scooped the *Ranx Xerox* French comic strip hero and is coming up with a sex game; Software Business is distributing *Hagar the Horrible*; and Virgin is still preparing a *Judge Dredd* game in time for Christmas.

# Mark Higham's GAMES WEEK



## THE 16-BIT TOP TEN

For the week ending September 29

Game name	Publisher	Format
1 <i>Targhan</i>	ACTION 16	ST/Ag/PC
2 <i>Yogi's Great Escape</i>	HITEC	ST/Ag
3 <i>Kick Off 2</i>	ANCO	ST/Ag
4 <i>Guardian Angel</i>	CODEMASTER	ST/Ag
5 <i>Treasure Island Dizzy</i>	CODEMASTERS	ST/Ag
6 <i>Battle Of Britain</i>	USGOLD	ST/Ag/PC
7 <i>Fast Lane</i>	ACTION 16	ST/Ag
8 <i>Pro Tennis Sim</i>	CODE MASTERS	ST/Ag
9 <i>F19 Stealth Fighter</i>	MICROPROSE	ST/PC
10 <i>Shadow Warriors</i>	OCEAN	ST/Ag

Personally I doubt we'll see many of them becoming classics. The word is that *Dredd* will be little more than a hackneyed platform game; *Gazza* is unlikely to compete with *Kick Off 2* and no one expects much from *Dick Tracy* or *Spiderman*. Still, if we're prepared to buy games because they have a familiar name, we deserve all we get.

## ON A DOWNHILL SLOPE?

Over the last few months rumours have abounded that Activision is about to close. It now seems that a small team of less than ten people will survive to produce a limited selection of console and 16-bit games.

Activision as we know it is going to go out with a bang. *Dragon Breed*, *Atomic Robokid* and *Spindizzy Worlds* are all scheduled to appear before you buy your Xmas turkey. *Dragon Breed* is an arcade conversion featuring some enormous sprites in pure shoot-'em-up action, as is *Atomic Robokid*, while *Spindizzy Worlds* is

the follow-up to the classic *Spindizzy*.

After Christmas Activision is releasing *Deuteros*, the follow-up to *Millennium 2.2*. The game is set far in the future after the end of *Millennium 2.2*. Space research stations have been abandoned and it's up to you to re-establish them.

In such a short space it's impossible to convey the magic of the game. When you get involved in it you realise *Deuteros* is absolutely enormous – far bigger and better than *Millennium 2.2*, with ten times more animation. *Deuteros* won't be around for a while but if you're a lover of intense games then you will love it. ■

## GAME REVIEW

### VAXINE

US GOLD • ST, Amiga – £24.99 • PC – £34.99

After writing the all-time whackiest game and giving it the eccentric title of *E-motion*, The Assembly Line has now turned its attentions to more kaleidoscopic mayhem. The result is *Vaxine* – guaranteed to be like nothing you've ever seen before.

Load up the game, start moving the mouse around and the first thing to hit you is the speed at which the screen moves. The floor of each level (and occasionally the ceiling) is made of coloured tiles. If you move the mouse even slightly, the tiles race off the edge of the screen faster than you can blink.

*Vaxine* is set inside a human body which is under attack from invading cells. The idea is to rid the body of these destructive cells using the only ammo you have at hand – coloured balls. The particular cells you need to protect are glued to the floor of the level. Enemy cells are represented as coloured balls and these sit on top of your healthy cells, slowly destroying them. The idea is to race round the level, seeking out these enemy cells and blasting them with a ball of the same colour. Since the enemy cells bounce up and down and race off the screen at a ridiculously fast rate, you need to aim carefully and quickly to destroy them. Some of the invading cells are connected by long strings and you must destroy all the cells in such a cluster to wipe them out.

When you've cleared one level of invading cells you're through to the next. This time the enemy cells start to invade your healthy cells at a quicker rate. Get that mouse moving fast and blast every ball you can spot.

The visuals alone are enough to keep you absorbed in *Vaxine*. The speed at which everything moves with just the slightest twitch of the mouse is incredible. However, the gameplay is what really matters. When you first start playing you realise that lining yourself up to blast the bouncing enemy cells is the hardest task you face. When you've eventually mastered the technique you can start ploughing through the levels at speed. Then you realise that, though *Vaxine* is certainly a unique challenge, the levels just don't have enough variety to keep you addicted into the early hours.

## PLAYING TIPS: Conquering Conqueror

### CONQUEROR • Rainbows

If you're still beaver away with *Conqueror* then here are some tips to make sure you can complete those manic missions. Put your tank in gear, push your foot to the floor and prepare for action!

■ When choosing your tanks try to come up with a balanced force. Light tanks are useful for reconnaissance and also as an emergency reserve. Heavy tanks are good at some brutal conflict with the enemy. Medium tanks combine the virtues of both but tend to be lacking in firepower and speed.

■ German tanks are worse at hill-climbing than either American or Russian tanks. If you play the German side, try and sit at the top of hills so you can rush down to your opponent. If you're playing the Allies then a useful tactic is to run away by going for the steepest hill.

■ *Conqueror* calculates the angle of incidence of any shot fired and uses this to work out the effective armour. Thus an oblique shot has more armour to penetrate than a square-on shot.

■ Front armour is the best on all tanks so present this to the enemy. Equally, always try and go for the enemy's flank or rear when shooting.



• Dash up hill to dodge the German tanks.

■ A sensible tactic is to form heavy tanks into groups and leave the light tanks to reconnoitre. This means the light tanks (which can travel faster) act as the 'eyes' of your force. Their standard tactics (when under auto-driver) are to run away from anything they cannot shoot and so they're ideal, as they will just report any sighting and it is up to you to direct a nearby group of heavy tanks to deal with the situation.

■ When using map fire don't forget that the shells take about 30 seconds to hit. So try and predict where the enemy forces will be at that time. Computer-controlled tanks don't look for map fire so, you must stay clear of the target area until you're sure the shells have landed.

■ Don't forget your drone tanks. Direct one to hold an enemy tank's attention while driving your tank to the rear of the enemy and shooting.



• Arrange your force so that you have the right balance of light and heavy tanks.



# THE CONSOLE ZONE

## SEGA MEGADRIVE

*Hellfire* is the latest shoot-'em-up to hit the Megadrive. This four-megabit cartridge from NCS/Toaplan in Japan is a single-player scrolling blast-'em-to-death with simple colourful graphics. It cost 6,800 yen (£27).

### PLAYING TIP

Learn new songs in *Phantasy Star II* by regularly visiting Ustedeich in Oputa.

Don't forget we want your Megadrive game hints and cheats. Send them to the normal address, or fax on 0225 446019.

## NINTENDO ENTERTAINMENT SYSTEM

A classic computer role-playing game is now available on the NES, courtesy of FCI.

"*The Bard's Tale* gives a new twist to role-playing by introducing the Bard, a wandering minstrel, whose songs have devastating effects on his enemies," states FCI, "the three dimensional scrolling map and clear graphics place this game on the cutting edge of role-playing games."

*The Bard's Tale* features a seven member party with six active characters, 16 maze levels, 43 spells in two classes of magic, mad dogs, dragons, orcs, ninjas, warriors and wizards. FCI adds, "With *The Bard's Tale*, the magic is in the music!"

### PLAYING TIP

Complete any *Thunderbirds* level by pausing the game and pressing [Upper Left], then simultaneously holding down [Button A], [Button B] and [Select].

## NEC PC ENGINE PLAYING TIP

Select any *Splatterhouse* stage by pressing [Select] three times when the house and lightning are on-screen. Then hold down [Left] and [Run].

## HI-SCORERS

So you think you're good, eh? Send us your scores on your favourite games for the Megadrive, Gameboy, Sega Master, NES, PC Engine, Lynx and Neo-Geo to: The Console Zone, Express, Future Publishing, 30 Monmouth Street, Bath BA1 2BW - or fax 0225 446019.

### GAMEBOY

<i>Super Mario Land</i>	331,860	Alex Taylor
<i>Tetris</i>	115,998	Michael O'Brien

### MEGADRIVE

<i>DJ Boy</i>	3,531,300	Alex Taylor
<i>Eswat</i>	277,900	Alex Taylor
<i>Final Blow</i>	2,525,040	Alex Taylor
<i>Forgotten World</i>	653,900	Alex Taylor
<i>Ghouls 'n' Ghosts</i>	102,400	Alex Taylor
<i>Golden Axe</i>	414.5	Alex Taylor
<i>Super Shinobi</i>	1,968,500	Alex Taylor
<i>Thunderforce</i>	2,429,100	Alex Taylor

Your weekly guide to console gaming with Richard Frederick.

## HARDWIRED FOR SOUND

What are Japanese nightclubbers dancing to in their local funspots? 'He's Gonna Step On You Again' by the Happy Mondays? No way. Madonna's 'Express Yourself'? Possibly. Remixes of video game and coin-op soundtracks? Absolutely! It seems the latest craze in the land of the rising sun is remixes of your favourite Japanese video games on compact disc.

The list of titles available is seemingly endless and includes arranged CD versions of Irem's *R-Type*; Namco's *Winning Run*, *Splatter House*, *Phelios* and *Metal Hawk*; SNK's *Time Soldiers*; Taito's *Arkanoid*, *Tiger Heli*, *Rastansaga*, *Darius* and *Midnight Landing*; Sega's *Galaxy Force*, *Space Harrier*, *Shinobi*, *Afterburner*, *Super Monaco GP*, *Outrun* and *Thunderblade*; Nichibutsu's *Moon Cresta*, *Crazy Climber*, *Mag Max*, *Terra Cresta*, *Galavan*, *Mighty Guy*, *Amateless*, *Danger*, *Bobby Kids*, *Legion* and *Terra*

*Force*; Konami's *Gradius (Nemesis)*; Technos' *Double Dragon* (incorporating the female vocal version of *Dead or Alive*).

That's not all! You can also buy a ten-track Tetris CD (*Toroika '90*, *Karinka*, *Hawker's Song*, *Technotorios*, *Northern countries mambo*, *First Division*, *Hero's Competition*, *Neddlewoman*, *Las Tonicflood* and *Ode*) and music from various Gameboy titles such as *Super Mario Land*, *Golf*, *Tetris* and *Solar Striker*.

These audio CD's cost between 2,500 and 3,000 yen (£10-12). Yuzo Koshiro is apparently the 'MC Hammer' of video game remixes, with a whole list of CDs to his credit, including 'The Super Shinobi & Works' featuring *Round Clear*, *Ninja Step*, *Blast Power*, *Flash Flash Flash* and *Asteroid Memory* tracks.

## NINTENDO GAMEBOY

To cash-in on its American popularity, there are now several baseball games available on the Gameboy. Namco has one costing 3,500 yen (£14) while *Pocket Stadium* from Atlus is a 'unique baseball simulation', where the player is in charge of managing one of 12 pre-programmed teams. Each player

has his own stats - batting average and home runs for the batters and ERAs for the pitchers. In the batting half of the game, you tell the batter how fast to swing his bat and where to aim for in the strike zone, the rest is decided by where the pitcher pitches and the batter's own ability to hit the ball. Similarly, you tell the pitcher what pitch to throw and where in the strike zone. Each pitcher has his own set of pitches, ranging from a fastball to a slider. As you can probably guess, *Pocket Stadium* is a strategic sports-sim. It costs 3,300 yen (£13).

### PLAYING TIP

To defeat the Abobo boss in *Double Dragon*, approach him at an angle and punch his lights out with a quick succession of well-aimed punches. Never tackle him head-on.

Don't forget, we need your Gameboy game tips and cheats. Send them to us at the normal address or fax 0225 446019.



## ATARI LYNX PLAYING TIP

Here are the *Chip's Challenge* passcodes 25-50:

- 25: PQGV
- 26: YVYJ
- 27: IGGZ
- 28: UJDD
- 29: QGOL
- 30: BQZP
- 31: RYMS
- 32: PEFS
- 33: BQSN
- 34: NQFI
- 35: VDTM
- 36: NXIS
- 37: VQNK
- 38: BIFA
- 39: ICXY
- 40: YWFH
- 41: GKWZ
- 42: LMFU
- 43: UJDP
- 44: TXHL
- 45: OVPZ
- 46: HDQJ
- 47: LXPP
- 48: JYSF
- 49: PPXI
- 50: QBDH

## SEGA MASTER SYSTEM

Domark, the classy British computer games firm, has just announced a third party licensing deal with Sega to produce a series of games on the Master System. The new titles have yet to be announced. Domark has previously released *Trivial Pursuit*, *James Bond* games and *Tengen* coin-op conversions on computer format.

"Over the last two years Domark has proved itself

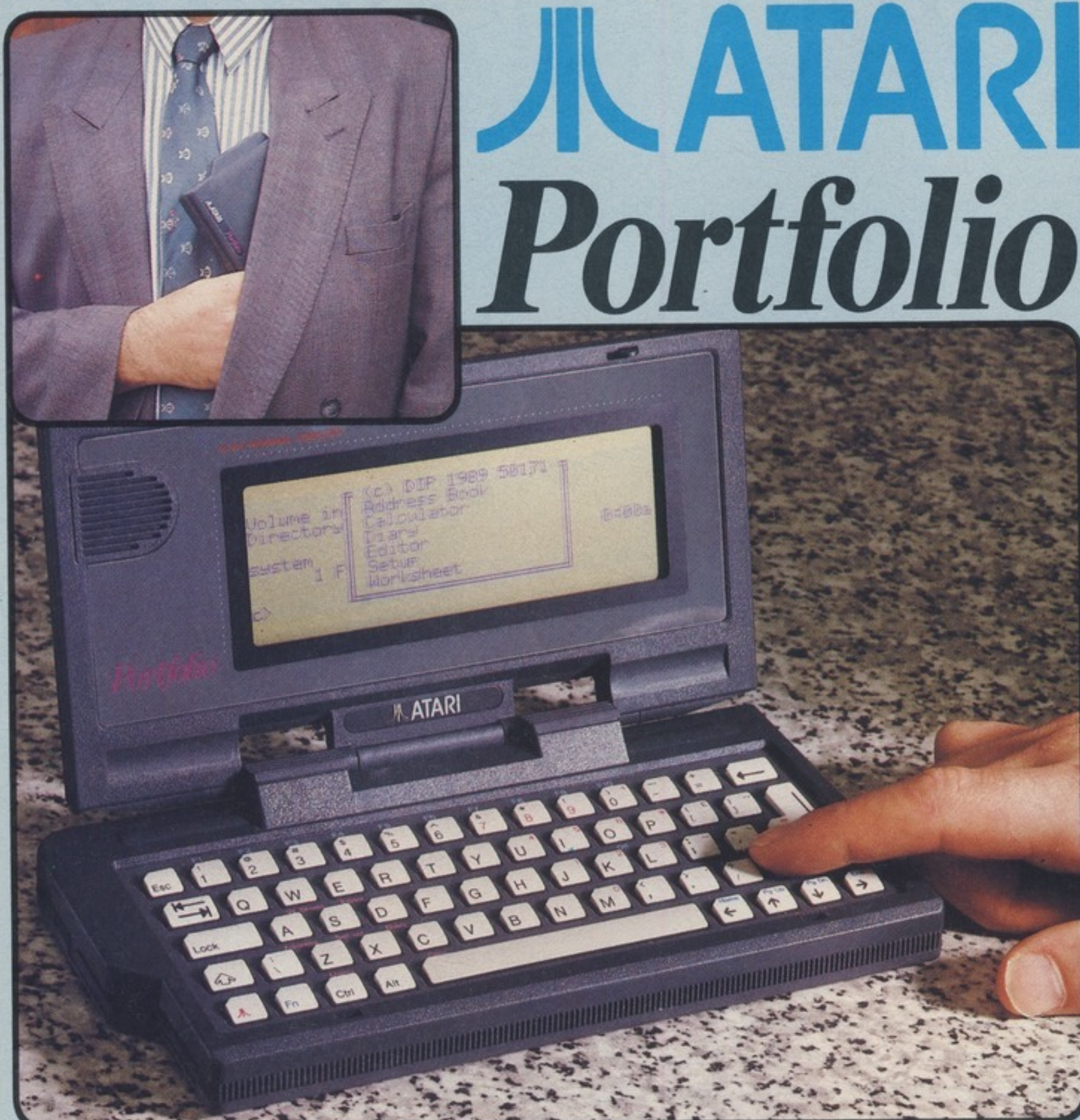
as being a creative, dynamic and reliable software house," says Mr Nobuhiko Ishihara, General Manager of Sega Europe. More details as we get them.

### PLAYING TIP

Select any *Enduro Racer* round by pressing [Reset] on the title screen, then [Up], [Down], [Left] and [Right].



★ POCKET SIZED ★ PC-COMPATIBLE ★ PERSONAL ORGANISER ★



# ATARI Portfolio

## THE PC IN YOUR POCKET

The new Portfolio from Atari is the world's first pocket-sized electronic organiser that is also a powerful PC compatible computer, with a full QWERTY keyboard and scrolling 80x25 character display.

Portfolio includes everything you would expect from an electronic organiser - an address and telephone book, time manager, diary and sophisticated calculator.

Portfolio also includes several functions that you would not expect - a spreadsheet for your personal budget and expense records, as well as a text processor for typing memos and letters.

And, because Atari's Portfolio is PC compatible, it can communicate with your desktop PC at home, or in the office. You can transfer files from one to the other, to enable you to update your reports and figures with the Portfolio while you are on the move.

FOR ONLY **£199** INC VAT

### SPECIFICATION

- ★ **Processor:** Intel 80C88 at 4.9152Mhz.
- ★ **Operating System:** Compatible with MS-DOS 2.11.
- ★ **Internal ROM:** 256K containing BIOS, operating system and applications suite.
- ★ **RAM:** 128K with an internal RAM disk, configurable from 8K. Externally expandable to 640K RAM.
- ★ **Keyboard:** 63 keys, QWERTY, IBM PC BIOS compatible. Buried numeric pad and function keys. Optional key click.
- ★ **Character Set:** Extended IBM ASCII (255 characters).
- ★ **Mass storage:** credit card sized memory cards (32K or 64K or 128K RAM).
- ★ **Display:** Graphics LCD, supertwist technology, MDA compatible, 40 columns x 8 lines, 240 x 64 pixels (with the option to window a full 80 x 25 character display). Keyboard controlled contrast.
- ★ **Peripherals:** 60 pin expansion BUS to take serial and parallel ports and memory expansion units.
- ★ **Size:** 8" x 4" x 1" (200mm x 105mm x 29mm).
- ★ **Weight:** 495 grammes (with batteries).
- ★ **Applications:** calendar and diary, address and phone book, Lotus 1-2-3 compatible spreadsheet, text processor, communications software.

### COMING SOON!

In addition to the excellent software built-in to the Portfolio Free of Charge (see right), other software and peripheral products, such as the sophisticated Pocket Finance package and serial/centronics interfaces are available. And it doesn't stop there. Many manufacturers have recognised the potential of the Portfolio and have already started to design new peripherals and software. Products currently under development include: Serial interface with built in mini modem, Apple Macintosh interface, business, utility and programming software plus a range of adventure and battle strategy games. For further free details on the Portfolio range, fill in the coupon below and return it to Silica Systems now.

## 5 BUILT-IN APPLICATIONS! TO GET YOU ORGANISED!

To get you started, Portfolio comes with a suite of five useful functions built-in, all accessible from a simple menu display.

### TIME MANAGER

More than just an electronic diary, the Portfolio Time Manager enables you to plan your appointments via a comprehensive calendar and diary. It can even be programmed to sound an audible alarm at specific times to remind you of important appointments.

### CALCULATOR

Your Portfolio will be invaluable in the office or at home as a powerful pocket calculator. It has a full range of functions, including factorial,

power and root calculations, all with multi display formats and memories.

### ADDRESS BOOK & DIALLER

Portfolio has a complete address book facility that allows you to store hundreds of addresses and phone numbers. And, at the touch of a button, you can retrieve any one of them, or search for a specific grouping, such as 'all Italian restaurants'. And, when you are ready to book your table, hold your Portfolio to your telephone mouthpiece and use its special built-in tone dialler to dial the number for you.

### TEXT PROCESSOR

The Portfolio's built-in text processor program

includes word wrap, line and column count, string search, in fact most of the functions you would find in a word processor. It handles printer and word processor control codes and allows easy transfer of files between Portfolio and your desktop PC.

### SPREADSHEET

For real calculating power, Portfolio has a Lotus 1-2-3 compatible spreadsheet built-in. It has 127 columns x 225 rows and reads/writes Lotus V1.0 and V2.01 files, so you can transfer data to and from Lotus 1-2-3 on your desktop PC. The Portfolio's 256K ROM includes MS-DOS and PC BIOS compatible systems software.



### MEMORY CARDS

Portfolio can store and retrieve data and programs from its own RAM, or from small credit card size memory cards, that slot into its built-in card drive. The cards are available in three sizes, 32K, 64K and 128K, so you can carry a library of data in your pocket. The card drive also accepts ROM cards, which can contain commercial or custom software.



### POWER SUPPLY

Portfolio is powered by three AA batteries which will run for up to six weeks with normal use, or from the mains using an adaptor. All the peripherals take their power from the Portfolio, so no extra batteries or adaptors are required. A 'battery-low' warning and memory back-up ensure that information is not lost when the batteries are changed.



### INTERFACES & PERIPHERALS

Portfolio can communicate with other computers and supports a growing range of peripherals via a built-in 60 pin bus connector. Peripherals available include serial and parallel interfaces and memory expanders (to 640K). You can also add a card drive to your desktop PC, to enable it to read/write to Portfolio's cards.

## SILICA SYSTEMS OFFER YOU

**FREE OVERNIGHT COURIER DELIVERY:** On all hardware orders shipped in the UK.  
**TECHNICAL SUPPORT HELPLINE:** Team of Atari technical experts at your service.  
**PRICE MATCH:** We normally match competitors on a "Same product - Same price" basis.  
**ESTABLISHED 12 YEARS:** Proven track record in professional computer sales.  
**£13m TURNOVER (with 60 staff):** Solid and reliable with maintained growth.  
**BUSINESS/EDUCATION/GOVERNMENT:** Volume discounts available for large orders.  
**SHOWROOMS:** Demonstration and training facilities at our London & Sidcup branches.  
**THE FULL STOCK RANGE:** All of your Atari PC requirements from one supplier.  
**FREE CATALOGUES:** Will be mailed to you with offers and software/peripheral details.  
**PAYMENT:** By cash, cheque and all major credit cards.  
**CREDIT PAYMENT TERMS:** Silica are licensed credit brokers - details on request.

Before you decide when to buy your new Atari Portfolio, we suggest you think very carefully about WHERE you buy it. Consider what it will be like a few months after buying your Portfolio, when you may require additional peripherals or software, or help and advice with your new purchase. And, will the company you buy from contact you with details of new Portfolio products? At Silica Systems, we ensure that you will have nothing to worry about. Silica Systems is a new division of Silica Shop, the UK's leading Atari specialists. This new division has been established to provide a service to the more serious home user, as well as to business and education purchasers. Silica have been established for over 12 years, and have an annual turnover of £13 million. With our unrivalled experience and expertise, we can now claim to meet our customers requirements with an understanding which is second to none. But don't just take our word for it. Complete and return the coupon now, for our latest Free literature and begin to experience the "Silica Systems Service".

**SILICA  
SYSTEMS**



**MAIL ORDER:** 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX Tel: 081-309 1111  
 Order Lines Open: Mon-Sat 9.00am-6.00pm No Late Night Opening Fax No: 081-308 0608

**LONDON SHOP:** 52 Tottenham Court Road, London, W1P 0BA Tel: 071-580 4000  
 Opening Hours: Mon-Sat 9.30am-6.00pm Late Night: Thursday until 8pm Fax No: 071-323 4737

**SIDCUP SHOP:** 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX Tel: 081-302 8811  
 Opening Hours: Mon-Sat 9.00am-5.30pm Late Night: Friday until 7pm Fax No: 081-309 0017

**BUSINESS/EDUCATION:** 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX Tel: 081-308 0888  
 Order Lines Open: Mon-Fri 9.00am-6.00pm Closed on Saturdays Fax No: 081-308 0608

To: Silica Systems Ltd, Dept NCE-1090 38 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX

### PLEASE SEND INFORMATION ON PORTFOLIO

Mr/Mrs/Ms: ..... Initials: ..... Surname: .....

Address: .....

Postcode: .....

Tel (Home): ..... Tel (Work): .....

Company Name: .....

Which computer(s), if any, do you own? .....

E&OE - Advertised prices and specifications may change - please return the coupon for the latest information.



**24-HOUR SERVICE**  
**OPEN: MON - FRI 9.00 - 5.30**  
**SATURDAY 10.00 - 2.00**

# Business Technology Centre

PHONE OR FAX: 0282 831900

**SEIKOSHA SL92**  
 24 PIN 42K BUFFER 9 FONTS  
**£299** INCLUDES ON-SITE WARRANTY

## DOT MATRIX PRINTERS

9 PIN 80 COLUMN	draft/nlq	£
STAR LC-10	144/36	125
STAR LC-10 colour	144/36	166
STAR LC-10 colour comm 64	144/36	166
CITIZEN 120D PLUS	120/25	105
CITIZEN 120D PLUS comm 64	120/25	105
CITIZEN PRODOT 9	300/60	265
SEIKOSHA SP2000 (21k buffer)	200/40	199*
SEIKOSHA MP1350	300/50	359*
PANASONIC KXP 1180	192/36	139
MAN. TALLY MT 81	130/26	104
OLIVETTI DM 100SPR	200/30	119*
EPSON LX 400	180/30	135

9 PIN 136 COLUMN		
STAR LC-15	180/45	255
CITIZEN PRODOT 9 x	300/60	345
PANASONIC KXP 1592	216/45	255
SEIKOSHA MP5350	300/50	499*

24 PIN 80 COLUMN		
STAR LC24-10	170/57	195
CITIZEN SWIFT 24	192/64	239
CITIZEN PRODOT 24	200/60	369
PANASONIC KXP 1124	192/63	219
SEIKOSHA SL92 (42k buffer)	240/80	299*

24 PIN 136 COLUMN		
STAR LCX24-15	200/67	325
STAR XB24-15	240/80	510*

\*ALL DOT MATRIX PRINTERS MARKED WITH A \* INCLUDE A ONE YEAR ON-SITE MAINTENANCE CONTRACT.

A ONE YEAR ON-SITE MAINTENANCE CONTRACT IS ALSO AVAILABLE FOR MOST OTHER DOT MATRIX PRINTERS - ONLY £16.

A FULL RANGE OF SHEET FEEDERS, TRACTORS, ACCESSORIES AND CONSUMABLES ARE ALSO AVAILABLE FROM STOCK - CALL FOR DETAILS.

**SWIFT 24 COLOUR**  
 24 PIN PRINTER INC. COLOUR KIT  
**£269**

## TERMS

ALL PRICES EXCLUDE VAT. PRICES AND SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE. CALL TO CONFIRM BEFORE ORDERING. STRICTLY CASH WITH ORDER. ACCESS, VISA AND AMERICAN EXPRESS WELCOME. POSTAL ORDERS, CHEQUES AND BANKERS DRAFTS ACCEPTED. OFFICIAL ORDERS FROM EDUCATIONAL AND GOVERNMENT ESTABLISHMENTS, CORPORATES AND PLC'S WELCOME.

## DELIVERY

ALL GOODS NORMALLY DESPATCHED WITHIN 24 HOURS FROM RECEIPT OF CLEARED PAYMENT - subject to stock availability.

PC'S AND LASERS	£15.00	NEXT DAY DELIVERY
OTHER LARGE ITEMS	£10.00	NEXT DAY DELIVERY
SMALL ITEMS	£5.00	4 DAY DELIVERY

## WARRANTY

ALL GOODS CARRY MANUFACTURERS WARRANTIES. ON-SITE WARRANTY AVAILABLE ON MOST DOT MATRIX PRINTERS AND PC'S - CALL FOR DETAILS. TECHNICAL SUPPORT AVAILABLE.

Goods not offered on trial basis. Goods are offered for sale subject to our standard terms and conditions of sale - available on request. WE STOCK MANY MORE PRODUCTS - CALL FOR DETAILS. LARGE STOCKS OF FLOPPY DISKS AND RIBBONS CARRIED.

E. & O.E.

## NON-IMPACT PRINTERS

		£
SEIKOSHA	OP105 LED (desktop size, takes legal paper)	1299*
STAR	LASER 8	1179*
STAR	LASER 8 DUAL BIN	1599*
H. PACKARD	LASERJET II	1199*
H. PACKARD	LASERJET III	1299*
OLIVETTI	PG 306	899*
CANON	BJ130 INK JET	519

ONE YEAR ON-SITE MAINTENANCE IS INCLUDED IN THE PRICE OF ALL THE ABOVE PRINTERS MARKED WITH A \*.

A FULL RANGE OF TONERS, FONTS, MEMORY CARTRIDGES, INK CARTRIDGES AND OTHER ACCESSORIES ARE STOCKED - PLEASE CALL FOR FURTHER DETAILS.

**OLIVETTI PG306**  
 LASER PRINTER  
**£899** INCLUDES ON-SITE WARRANTY

## PLOTTERS AND SCANNERS

HITACHI	681	A4/A3 PLOTTER	520
HITACHI	674	A4/A1 PLOTTER	2149*
(includes one year on-site warranty)			
PANASONIC	FX-RS505	SCANNER	919
(with I/F card, cables, IMAGE AND OCR software)			
NISCAN	HAND SCANNER		139
NISCAN	OCR software		189

## DRIVES

CITIZEN	OSDD 05A-WD		
	3.5" 720K in 5.25" KIT		59
CITIZEN	OSDA 39C-WD		
	3.5" 1.44mb in 5.25" KIT		69
CITIZEN	OSD 76A-WD		
	3.5" 720K AMSTRAD KIT		59
INTERNAL	5.25" 1.2mb		59
INTERNAL	5.25" 360K		69
JAVELIN	HC20		
	20mb XT HARD CARD		185
JAVELIN	HC30		
	30mb XT HARD CARD		199
FILECARD	HC40 40mb AT HARD CARD		229
KYOCERA	KC 20B(s)		
	20mb XT/AT DRIVE, 3.5"		138
KYOCERA	KC 30B(s)		
	30mb XT/AT DRIVE, 3.5"		158
KYOCERA	FRAME		
	5.25" kit for 3.5" hard drives		5

DRIVE CONTROLLERS AVAILABLE - CALL FOR DETAILS.

## CABLES AND ACCESSORIES

PRINTER CABLE	1.8 metre	8
PRINTER CABLE	3.0 metre	9
SERIAL CABLE	1.8 metre	10
T SWITCH	2 way serial	18
T SWITCH	2 way parallel	18
T SWITCH	2 way serial crossover	25
T SWITCH	2 way parallel crossover	25
BUFFER	64k in-line	79

**ACORN A3000**  
 1Mb RAM KIT  
**£89**

## COMPUTERS

ALL OUR COMPUTERS INCLUDE A MONITOR.

### COMMODORE

ALL MODELS INCLUDE ONE YEAR ON-SITE MAINTENANCE

	MONO	CGA	VGA MONO	VGA COLOUR
	£	£	£	£
PC 10 SD	485	615	635	725
PC 10 DD	535	665	685	775
PC 20 HD20	675	795	845	945
PC 30 HD20			967	1128
PC 40 DH40			1229	1379

**COMMODORE SPECIAL**  
 PC 10SD INC 40MB DRIVE & MONITOR  
 INCLUDES ON-SITE WARRANTY  
 MONO CGA MONO COLOUR  
 £699 £829 £849 £949

### SAMSUNG

ALL MODELS INCLUDE ONE YEAR ON-SITE MAINTENANCE

	MONO	VGA MONO	VGA COLOUR
	£	£	£
SPC 3000 SD	483	589	789
SPC 3000 DD	569	659	859
SPC 3000 HD20	739	839	1039
SPC 6512 DD		919	1119
SPC 6512 DD HD40		1109	1309

### HYUNDAI

	MONO	EGA	VGA MONO	VGA COLOUR
	£	£	£	£
16TE SD	419	699		
16TE DD	459	759		
16TE HD30	619	919		
286x SD			639	819
286x HD40			939	1119

**HYUNDAI 16TE**  
**£419** MONO XT AND MONITOR  
**HYUNDAI 286X SD**  
**£1099** HD 40 AND VGA MONITOR

## PORTABLES

SHARP	4602	DD	789
SHARP	5541	286 HD40	2099
SAMSUNG	S5200	286 HD32	1707*

(includes on-site maintenance)  
 NOW IN STOCK  
 SHARP 8041 & 8081 386 LAPTOPS - CALL FOR PRICES.

**SHARP 5541**  
**£2099** HD 40 286 LAPTOP

THIS IS ONLY A SMALL SELECTION OF THE PC'S THAT WE SELL - CALL FOR FURTHER DETAILS.

**PHILIPS CM9053**  
**EGA MONITOR**  
**£249** INCLUDES ON-SITE WARRANTY

## MONITORS

			Price £
MONO	HYUNDAI HMM1200	12"	65
MONO	PHILIPS BM 7513	12"	69
MONO	PHILIPS BM 7913 FST	12"	80
MONO	SAMSUNG MA 2671	12"	81
MONO VGA	PHILIPS BM 7749 FST	12"	107
MONO VGA	SAMSUNG ML 2611	12"	81
MONO VGA	SAMSUNG ML 4571	12"	95
MONO A4	SAMSUNG MP 5671	A4	634
(includes card and software)			
CGA	PHILIPS CM 8833	14"	199
EGA	PHILIPS CM 9053	14"	249
EGA	PHILIPS CM 9073	14"	289
EGA	SAMSUNG CM 4551	14"	281
VGA	PHILIPS 3CM 9809	14"	325
VGA	SAMSUNG CJ 4581	14"	281
MULTISYNC	SAMSUNG CT 4581	14"	340

ALL MONITORS INCLUDE ON-SITE WARRANTY EXCLUDING THE HYUNDAI HMM 1200.

MDA/CGA CARD with PRINTER PORT	45
MDA/CGA/EGA CARD	99
VGA CARD	129

## UPGRADES AND ENHANCEMENTS

**MDM2400 PC CARD MODEM**  
**£135** INCLUDING SOFTWARE

AKHTER	MDM 2400 PC CARD MODEM	135
FAXTEL	FAX SWITCH (auto switches calls to fax or phone)	69
KEYBOARD 84	84 KEY UK LAYOUT XT	41
KEYBOARD 102	102 KEY UK LAYOUT XT/AT	52
RAM CARD	576K - XT	27
RAM CARD	2Mb - specify XT or AT	93
SERIAL MOUSE	includes DR Halo III software	38
MULTI I/O CARD	XT - RS232/printer/clock/games/floppy	54
I/O CARD	AT - RS232/Printer	54
I/O CARD	XT RS232	19
UPS	250W	199

MEMORY - call for prices of SIMM's, SIP's and DRAM's.

## SUPERDEALS

SCHNEIDER	220 AT MONO PC SYSTEM	909
SCHNEIDER	20mb HARD DRIVE KIT	199
HYUNDAI	360K DISK DRIVE	45
YE DATA	720K DISK DRIVE	49
SHARP	JX 9300 LASER PRINTER	949
SHARP	JX 720 INK JET PRINTER	649
MICROVITEC	1431 DS4 - BBC MONITOR	169
MICROVITEC	1451 MS4 - BBC MONITOR (metal case)	229
MICROVITEC	1456 DL2 - NIMBUS MONITOR	249
MIRACOM	COURIER HST MODEM 9600/ V22bis/V22/V21/V23 & MNP	539
IBM	MODEL 30-021	849
IBM	MODEL 50-061	1599

**WE ARE AN ACORN EDUCATIONAL DEALER - CALL FOR PRICES.**

Business Technology Centre

HOLE HOUSE FARM, BURNLEY RD, CLIVIGER, LANCS., BB11 3RF

Tel. & Fax: 0282 831900 (24 HOURS)







Everyone with a musical bone in their body seems to have gone MIDI mad. Keith Pomfret looks at some of the affordable pieces of kit available in the high street.

Ten years ago when music started its painful transition from analogue to digital, Japanese and American companies got together to create a standard way for musical instruments to communicate with each other. Professional musicians were able to grasp at MIDI, but it's only recently that MIDI instruments have become cheap enough to make computerised music a realistic home hobby.

Reams of articles have been written about which MIDI package is the best for which computer and how the various computers perform as studio sequencers, synthesiser programming devices and composition tools. Here, we've looked at the home as the basis for a MIDI 'hobby' set up. But first you'll need to make your computer talk MIDI.

The Atari ST already has MIDI ports, the PC needs a MIDI interface card and all the rest need a MIDI interface module. Once you have the magic interface attached, you'll need software. For a simple MIDI studio, it's a good idea to start with a sequencer. This works like a multi-track recording studio only it records data, not music.

Once you've got the software and attached the interface it's up to you to decide what instruments to plug in. It's not necessary to spend a fortune on a stage quality synthesiser. You can get quite a lot for a little.

### SIZE ISN'T EVERYTHING

The first thing is to find out what you need. As with all things musical, it's necessary to define what sounds are required and what extras in the way of features and accompaniment.

The first big decision has to be the size of the keyboard. In the main, there are two sizes. The full sized piano/organ keyboard matches a standard piano and anyone who can already play will probably take this route. The slightly smaller accordion-sized keyboard may look a better bet for little fingers if the kids are to play too, but little fingers grow and the traditional school of thought maintains that a full sized keyboard is a

necessity.

Someone with big stumpy fingers (like mine) will find the smaller keyboard clumsy and difficult so be sure to try before you buy. If the keyboard's comfortable, you can think about what sounds you require. Most of the affordable keyboards are of a kind known as a preset synthesiser.

### PRESET SOUNDS

A preset synthesiser is an instrument that makes (synthesises) sounds artificially, but all of the 'made' sounds are preset. There may be a piano, organ, strings and harpsichord. The point of a preset synth is that the sounds are not editable by the user. The piano sound you get is the one that you play. Changes of sound and tone can only be made by picking another instrument. Preset synths can have any number of preset sounds.

A simple preset synth such as the Casio CPS-700 only has five presets and is effectively an electric piano with harpsichord, vibes and a rudimentary pipe organ. The quality of the sounds is good and the six octave full sized keyboard is touch sensitive.

At the other end of the preset spectrum are instruments like the Yamaha PSS and PSR series. These instruments offer many preset sounds and 100 plus different preset voices isn't unusual. Some of the better specified ones offer some degree of editing, but in real terms, they are at their best playing back their preset voices.

### SOLO OR ENSEMBLE

Once you've decided whether to be a pianist or a multi-orchestral player, you've got some more decisions to make. Because MIDI can operate on 16 discrete channels, if you intend to use your keyboard as the core of a computer controlled studio and want to be able to hear several sounds at once, you'll need a multi-timbral setup.

Synthesisers can play several notes at once, but on occasions it is desirable to be able to play back dif-

# LET'S TALK MIDI

ferent sounds together. If a synthesiser is 16 note polyphonic, you can press 16 keys at a time and hear 16 notes. On a simple synthesiser, if you were to use the organ preset, you could play up to 16 organ notes and not much else beside. On a multi-timbral instrument you can assign different preset voices to different channels and mix and match them.

### LIVING ROOM ORCHESTRA

On a sixteen note polyphonic multi-timbral synth you might assign four notes to a piano accompaniment on channel two, four notes to a string ensemble on channel three, one note to an electric bass on channel four, three notes to a brass section on channel zero and the remaining four notes to percussion. You could use a computer to drive all of the channels or assign one to the keyboard and play along with the rest of the computer driven tracks.

As well as the chance to let MIDI do all of the work, some keyboards come with auto accompaniment sections. These can be broken down into two main sections – musical and percussion. The percussion accompaniment will generally be some sort of pre-determined rhythm such as rock, samba, 16 bar, etc. These rhythms will provide a percussive accompaniment in the style of your choice, sometimes with starts, ends and fills, and the more clever ones will change the makeup of the rhythms from bar to bar.

The musical accompaniment can be a simple device that picks out a bass line or provides a chorded accompaniment from playing a single note to a full blown orchestral section. Drums, bass, orchestral backdrops and tune following are some of the features offered on a few of the more expensive keyboards.

From then, it's a matter of taste. Some keyboards do whizzy demos. Others offer auto accompaniment and rhythm. Don't be baffled with science. Be sure that you get the features that you consider desirable and not that you go down the road of buying a synth because it has every possible extra.





## ON TEST

We grabbed a few boxes of synths and set them up in the *Express* office to put them through their paces. Colleagues who had never been heard to even whistle became Semprinis overnight. A passing administrator turned out to have a touch of the Claydermans and even a high-powered ad executive was seen to nod musical approval. After a couple of weeks of symphonic cacophony, this is what we thought.

### ELECTRIC PIANO PLUS

First on to the test bench was the Casio CPS-700. This 6.5 octave black box looked a little austere compared with the other keyboards on test. A full sized and almost full length piano keyboard made this beast reach from the filing cabinet to the coffee machine. The main panel doesn't boast many controls. The CPS-700 claims only to be a digital electronic piano, but the MIDI ports on the back and a couple of interesting presets give it synthesiser status.

Unlike many of the keyboards available, the CPS-700 attempts to be a reasonable copy of a traditional instrument. The full sized over-long keyboard seems to stretch forever compared with the accordion style models. The keys are square fronted and shaped like traditional piano keys.

Your choice of sounds is limited to five presets. They are Piano, Harpsichord, Vibraphone, electric Piano and Pipe Organ. The piano sound is pure upright piano and must be the result of sampling the real thing. In true piano style, the notes sound louder the harder you hit them and by careful tinkling, these ivories (shouldn't that be plastics? - Ed) can provide a true representation of the piano sound with all the crescendo and live dynamics of the real thing.

A demo button shows the CPS-700 to be a worthy contender for space in a house or flat where there's no room for a proper piano. The harpsichord is tinny and although it has the metallic plucked sound of its prototype, loses all of the real instruments dynamics by the



fact that there is no sensitivity control. The vibraphone preset demands a delicate bouncing touch and when played that way offers a true jazz sound.

The electric piano is a little on the spacy side with a slightly out of tune out of phase feel that I found annoying, but was outvoted on by my colleagues.

Finally, the pipe organ was a let down. A thin reedy sound with none of the pomp and majesty of the real thing. Toccata and Fugue lacked depth even through external amplification.

The rear panel contains a socket for mains power. The CPS-700 runs from a mains power pack or batteries making it totally portable. A line out socket for a 1/4 inch jack plug allows it to take advantage of external amplification and a similar socket takes a damper pedal a la piano for further expressive playing. A turret control allows fine tuning of the instrument allowing tuning to other instruments. Finally, MIDI in and MIDI out connect the CPS-700 to the rest of your MIDI kit or your computer. The front panel revealed a sensibly placed headphone socket.

At the end of the day, the demo was left on to attempt savage beast soothing. The demo is almost a recital. Yard after yard of manuscript passed digitally to the speakers.

For all of my complaints about the organ, the lovely piano makes it worth its weight in MIDI cables. For my money, the simplicity, full sized touch sensitive keys and built in stereo speakers make it a good base unit for a MIDI studio.

The Casio CPS 700 costs £499.

### MULTI VOICE SYNTH

Staying with Casio, it was difficult to pick a suitable test instrument in the multi-preset department so we looked at several. All of the instruments available were capable of running from batteries or mains so the first hurdle that we arrived at was again the accordion or piano key-

board.

To give a true balance we settled on the MT750, an accordion sized 5 octave keyboards with more prominent features than Sam Fox

This mighty midget (the keyboard, not Sam Fox !) had connectors for the mains power unit, amplifiers and a full compliment of MIDI ports. A turret tuner was included and a headphone socket was there to take some of the strain off the neighbours.

Standard charcoal grey on the front panel covered a couple of stereo speakers at the ends and several panels of controls. A pitch bend wheel is included on the left of the keyboard and the obligatory demo button gives you a taste of what you wish you could play.

There's a full control section allowing you to vary the volume of the rhythm, accompaniment and main sections and a selector allows you to choose the type of accompaniment or select the external MIDI codes.

The orchestral and percussion accompaniment built into the MT-750 contains various features to allow variations to the way the musical and percussive backing is laid out. One touch buttons allow intros, fills, breaks, endings and codas to be dropped in to the live performance.

A tone editor allows some very basic editing of the sound envelope shapes. But this machine gains most from the sheer multitude of voices and accompaniments available. 110 sets in the beat bank divided into sub-groups of Rock, Pops, Jazz Classic, Latin Disco and others.

The instrumental bank is even bigger with a possible 220 tones divided into 16 sub groups covering every section of the musical spectrum and some that aren't even musical.

The MT-750 is easy to use and despite the small keys, even the most un-musical among us was making melodic sounds in a few minutes. With all of the clever automatic accompaniments switched off and the MIDI ports brought into play, the MT-750 showed another

## WHAT IS MIDI

MIDI is an internationally accepted set of rules that allows computers, MIDI instruments, expanders, and even recording equipment can communicate with each other. The MIDI data is carried along standard 5pin DIN-DIN cables so no complicated cables are necessary.

MIDI works like the serial port of a computer, sending data along a serial link in a format that any MIDI equipped instrument or computer can decode and use. The MIDI data is carried at the zippy speed of 31.5k Baud. As MIDI has 16 channels, it's possible to have several different instruments assigned to a different channel each and use a computer or sequencer to send different data to each assigned channel. This way a single computer controlled by one person can play a complete orchestra or band.

To check if your keyboard, synth or instrument is MIDI equipped, check the outputs panel at the rear. There should be 5 pin DIN sockets marked IN, OUT, and THRU. Some cheaper keyboards only have IN and OUT implemented. (Some of the odder instruments such as MIDI guitars only have MIDI out.)





side of its character as a well behaved module in a MIDI set up. Driven by an expensive 386PC, the MT-750 fell in with the LAPC1 sound card resident in the PC and assigning different voices to the Casio and the sound card brought a veritable orchestra tumbling out of the office hi-fi.

A good value preset synthesiser with enough features to keep an old hand potty trained on a pipe organ happy.

The Casio MT750 costs £199.99.

### WHAT, NO KICKSTART?

Yamaha came under the microscope next with the PSS 790 sitting atop the *Express* bench.

The PSS 790 has accordion keys with an unusual arrangement of touch sensitive drum pads below the keyboard. Built in Stereo speakers carry the sounds and a performance wheel controls pitch bend. The rear panel has a power pack power input, a headphone/line out socket and a full set of MIDI ports. Battery and mains use are supported making it portable enough to play anywhere.

The features include 100 voices, 50 rhythms, auto accompaniment, full MIDI implementation and a multi-timbral mode.

A built in sequencer allows the simple 8 line sequencing of songs giving a simple multitracking facility although it must be said that this sequencer doesn't compare with some of the high powered sequencers found in the higher level professional equipment such as the Yamaha SY series.

The PSS-790 has all of the accompaniment and percussion modes of the Casio described above and although it doesn't have as many voices or percussion rhythms as the Casio, it makes up for itself with the full

Let's take a look at one of the keyboards that a professional musician might use and see what you get. The Yamaha SY55 falls in the £1,000-£1,500 price range and is a completely programmable synthesiser with a built in sequencer, sound editor and a full velocity-sensitive keyboard with after touch.

Simply, this means that the sounds that it can make are all 'soft' and you can start from scratch and build a sound from the available waveforms, amplifiers, filters and oscillators or you can take an existing preset sound or voice and tailor it to your own needs. When you have the sound that you want, you can further build on it by the addition of performance controls.

These could add say vibrato like modulation to an instrumental solo or control the degree with which the loudness increases with the velocity that the key is struck.

The SY55 is multi-timbral too, so more than one voice can be played at the same time. Playing live, this is limited by the manual dexterity of the musician, but using a computer to control the SY55 and assigning different MIDI channels to different voices means that you can attain a full orchestral effect from a single instrument.

A full set of percussion instruments and drums are available as a preset on the SY55 so surprisingly life-like orchestras and bands can be assembled. The three internal demonstration routines provide an atmospheric, orchestral, pop, rock and even jazz-like intro to the machine's capabilities.

The true MIDI implementation of the SY55 allows it to be the central tone and live control module for live performance. Allied to a computer it becomes the basic unit of a MIDI studio and its control parameters make it a powerful and

desirable piece of kit for a professional musician.

Like most keyboards, it suffers from a small display in which to edit all of its functions. This isn't a problem with some of the cheaper, more rigidly programmed synths, where a simple yes/no decision is the limit of the programming requirements.

With a machine like the SY55 however, where parameters run into the hundreds, a computer to do the editing, and for that matter the sequencing, is desirable if not necessary. The on-screen display showing all of the main functions offers a better overall visual picture. Keyboards vary in price from place to place, but a local stockist gave these prices for the Yamaha SY range.

Yamaha SY22	£799
Yamaha SY55	£1,099
Yamaha SY77	£1,999

multitimbral mode that allows an ensemble of multiple parts to be constructed and played back using MIDI control.

Again, a pleasant box of tricks at a price that can be afforded. It blended well with the other instruments and was simple to control from a computer, fitting in nicely with the PC sound card.

The Yamaha PSS 790 costs £229.99.

### THE PRICE OF PLAYING

There's no hard and fast rule as to what you can expect to pay for a MIDI instrument. The dark recesses of high street chains have given up the occasional end of line MIDI keyboard for £50 or so but a more realistic price range is £100-£500.

For £100 you'll get an adequate machine, probably with an accordion sized keyboard and limited features. £500 will buy a home synth of good enough quality to take out and play professionally although a true pro would probably be looking for the voice quality and features found on the Yamaha SY series.

If you want an instrument for your home enjoyment and you aren't too bothered that it is state of the art, look for end of line bargains. Whatever you buy will remain MIDI compatible and even if you upgrade at a later date. Your existing keyboard can remain a part of things using those magic MIDI leads.

### YOUR COMPUTER

If you own an Atari ST, there are already MIDI ports built in. Otherwise it's an interface (or a card if you've a PC) to get your machine talking MIDI. You'll also need some software to drive your equipment or edit sounds. Keep scanning the pages for your machine to keep up with new innovations. ■

The Instruments we tested were kindly loaned by Yamaha, (SY55) Tandy, (All the other Yamahas) Roland (the LAPC1 PC soundcard and MIDI interface) and Casio (All the Casio synthesisers and a rather nice Casio MIDI guitar which will be making a appearance in a forthcoming feature).





# ATF II

ADVANCED TACTICAL FIGHTER II



## ADVANCED TACTICAL FIGHTER II — Strategic Frontline Action —

A unique blend of arcade action and mind-bending strategy.  
Beyond today's technology — fly into the future with ATF II....

Atari ST/STE, Amiga & all IBM formats. r.r.p £24.99

Digital Integration Ltd., Watchmoor Trade Centre, Watchmoor Road, Camberley, Surrey, GU15 3AJ Tel: 0276 684959 Fax: 0276 21541





# SAMPLED DELIGHTS

Andy Hutchinson makes music (or rather borrows other people's) with an amazing new sound sampler. Pro-Series 12 includes just about all you need, so go out there and plagiarise!

**T**wo-Bit systems is a company which has been active in the world of ST samplers from the outset. Its ST Replay sampler reputedly sold over 15,000 units world-wide in just three years. The company decided that it would bring their expertise to a serious sampling system which would bridge the gap between professional and home ST users. The result is the Pro-Series 12 sampler.

## THE HARDWARE

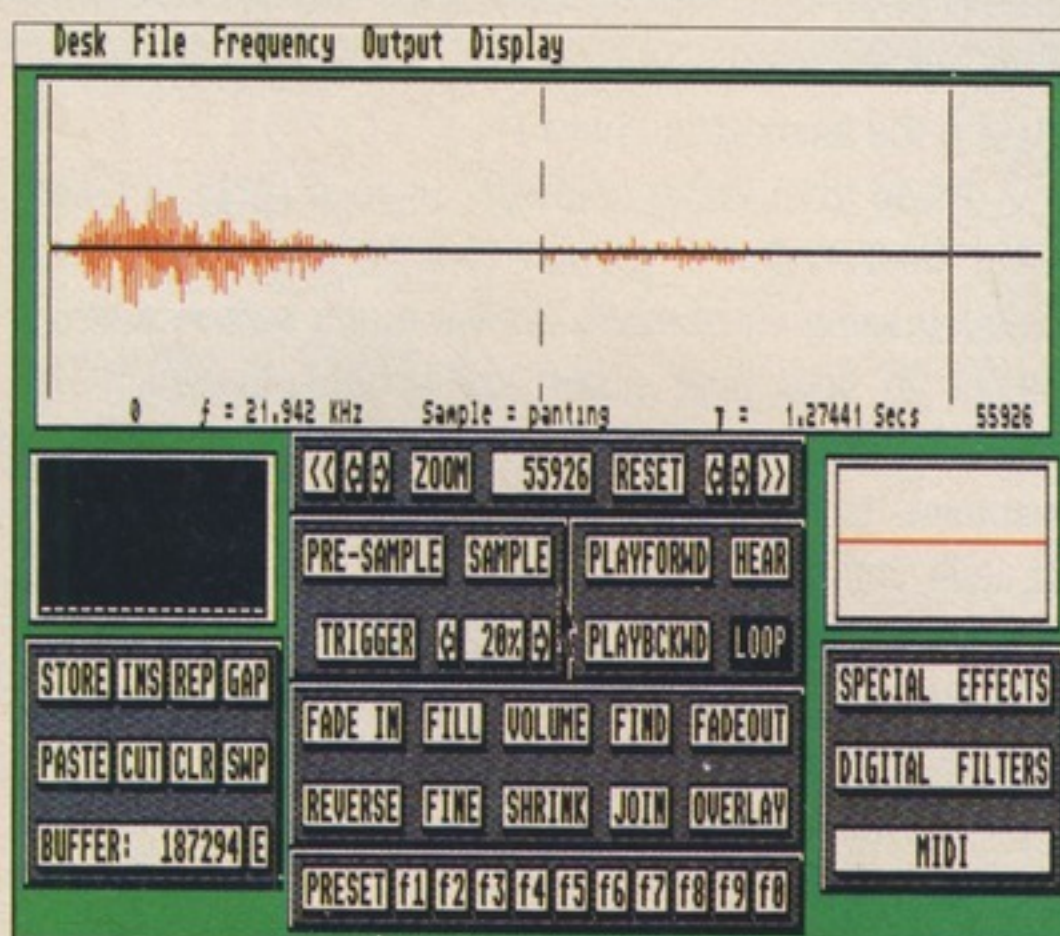
The cartridge is large and has a very well designed feel to it. None of this dodgy plastic add-on look, the sampler feels like a professional piece of kit and its technical credits reinforce this.

The technical specifications on the sampler cartridge are very impressive. Input resolution is 12 bits while output is 14-bit. The band width covers 20 Hz through to 12 kHz. The input signal to noise ratio is a very respectable 70 – 72 dBs and the maximum sample frequency is greater than 100 kHz. The side of the cartridge includes input and output phono sockets and a volume level control. The sampler has its own power source which comes with a nice long lead.

## THE SOFTWARE

The excellent hardware specification of the cartridge is more than backed up by the well designed software which accompanies it. The software comes on five disks and includes an editor, a drum machine program, a midiplay module and a disk each of example songs and samples.

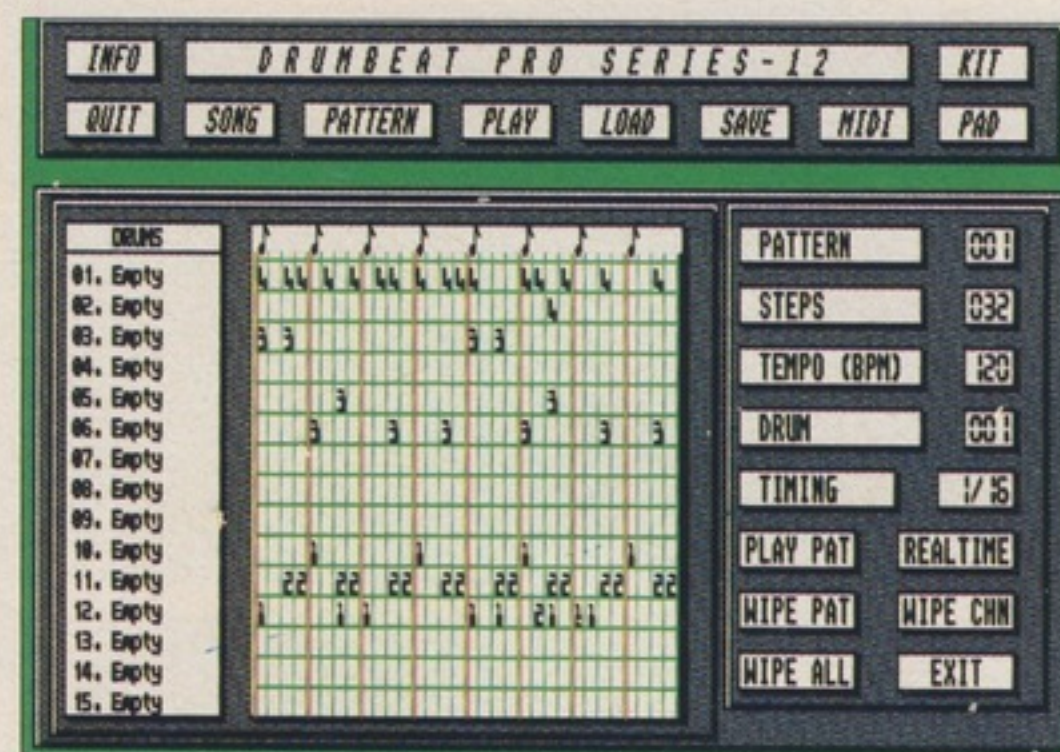
The sample editor is very well featured. The top



• Captive sample on screen.

portion of the screen display is taken up by a graphical display of the sample. Beneath this, on the extreme left and right sides of the screen are a spectrum analyser and an oscilloscope. The spectrum analyser shows sample input in the graphic form of a constantly updated bar graph, while the oscilloscope is a traditional wave form display.

Most of the editor's functions are accessible from the front end graphical display. Sample record, playback (forward or reverse), trigger, loop, zoom and reset functions occupy the central portion. Beneath this are some of the sample control functions. Fade-ins, fills, shrinks and fills can all be carried out on the sample from here. Under the spectrum analyser are the various physical sample editing functions which enable you to cut and paste portions of samples around the sample edit window. Icons below the oscilloscope display enable you to access the special effects, digital filters and MIDI sections of the editor.



• Organising a roll on the drums is as simple as 1 2 3.

The cartridge can sample at 5.5, 8, 11, 16, 22, 32, 44 and 48 kHz. The last two frequencies are better than a CD player and up to the same rate as a digital audio tape recorder. Obviously the size of a sample rests on the frequency and the amount of available memory. On a 520 STFM five seconds can be sampled at 22 kHz, while on a 1040 this goes up to 17 seconds at the same frequency. If you're lucky enough to own a Mega 4 then a full 88 seconds of 22 khz can be sampled into memory.

Editing of samples is very quick and easy. The sample window contains three cursors: the lower edit, the upper edit and the ghost cursor. The lower and upper edit cursors mark the area in which functions are performed. The ghost cursor's position varies depending on where the sample playing had reached. This

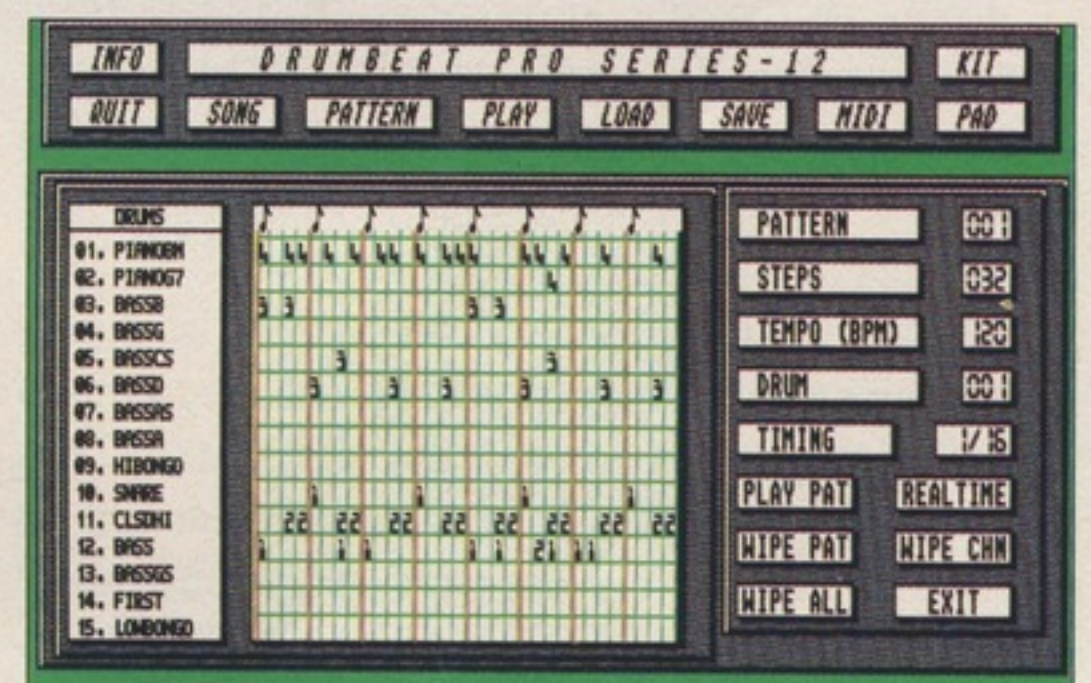
means that if you stop a sample halfway through, its ghost cursor is positioned in the middle of the sample and thus particular sections can quickly be located and edited.

Once a portion of sample has been located this can then be copied or cut and pasted to another section of the edit window. An impressive array of special effects can be used to get the sample sounding just the way you want it to. For example, the sample can be made to sound as if it was made in a hall or in a room. Other effects include echo, reverb, chorus, flange, ramp and pitch. Digital filtering can be used on the sample so that certain sections can be electronically boosted, have the bass pumped up or the hiss removed.

To aid you in the actual business of working on the sample a large 3-D frequency content graph can be displayed on the screen. Once activated, this accessory enables you to visualise the sound much more clearly than is possible with a simple two-dimensional display. Furthermore it also gives a total view of the sound, showing any small defects which may have escaped your attention so you can put them right before you proceed any further.

## THE DRUM MACHINE

The Drumbeat editor is a drum machine which matches most professional pieces of kit. Drum samples can be loaded into memory and played back four at a time in realtime. Songs or patterns can be loaded and saved and drums can be played in realtime. Moreover, complete drum kits can be saved to disk, in order that different sounds can quickly and easily be loaded and used.



• Or how about a tinkle on the piano or seven, and why not pump up the bass while you're at it?

## MIDIPLAY

The midiplay program is a keyboard emulation program which enables sounds created in the sampler to be played back via a MIDI keyboard. Particular voices can be assigned to a specific key and the volume and tuning of the samples can be edited. A graphical display on the screen shows the sample being played or the various key/sample definitions. There are four MIDI modes available. These enable you to play back either four voices of the same sample on the keyboard; one voice of each of four samples; four samples assigned to the four most recently played keys; or to have four voices assigned to four different MIDI channels.

## VERDICT

The Pro-Series 12 sampler is a superb piece of equipment. Everything about the cartridge echoes the professionalism of the software used to control it. The sampler is a serious effort at bringing professional needs to the home user, although it would be equally at home in a professional recording studio. The high price range is more than justified when you consider just what you're getting for your money - only thing is you may have to borrow money to borrow sound! ■

Pro-series 12 costs £245 and is available from AVR on 0582 457348.



It may be a cliché but it's true; writers are as diverse as the subjects about which they write. You wouldn't expect Stephen King to pen in the same way as Salman Rushdie would you? The idea that Charles Dickens could have been as critically acclaimed as he was had he created Noddy is laughable. So how come software manufacturers think that they can create 'style checkers' to which we are all supposed to adhere?

The concept of the Style-checker stems from three basic premises; the fountainhead is the ubiquitous spellchecker, you know that piece of software which turns a sentence like "Bernie zipped from Crewe to Lewes in his Capri" into "Perrier zipped from Screwy to Lease in his Caper". Another point is English grammar, now becoming fashionable once again. The final factor in the rise of the style-checker is that large companies in the United States, and now in this country, actually demand guidelines for their corporate documents which can be adhered to more closely than a duckling to its mother's down. Style checking is not a mere pedantic frippery in the business world, it's deathly serious stuff.

Style-checkers as a genre are knocked down, packaged-up and are well-aimed English teachers in full marking mode with no mercy.

Take, for example *Grammatik IV*. Thankfully this citizen of the US software world has been ported over to a true English version. Now, admittedly English grammar and American grammar have no perceivable differences; split infinitives are still split, incorrect verb usages are still incorrect, and improperly used possessive pronouns remain, well, wrong.

Unlike its previous incarnations *Grammatik* does not treat you like a silly schoolchild. Gone are the old days of this genre when the style-checker became the editor and would attempt to utterly homogenize your written work. It is more subtle than that now.

Getting the thing running can be a bit of a pain without a hard disk. Being more than one megabyte in size, attempting to use it from floppy is basically a non-starter. Once the program has been installed on a word processing directory, the experienced user can work straight from the command line. This entails calling it up to give a run through of your text. This method does call

# EDITING MADE EASY

Tim Smith shows you how to be stylish without trying too hard. How to say what you mean without breaking any laws (of grammar, that is). And simply how to get it right.

for your grasp of the English language to be as good as that of *Grammatiks* as it merely highlights mistakes and allows you to make the changes. So, if a sentence such as "He planned to searingly indict the misuse of toytowns police powers" was highlighted all you get are two messages telling you what the mistakes are but not, why they are mistakes. For those of you who still don't know, there's a split infinitive, and a missing possessive and that's gospel.

The other, more helpful mode is buzzword city itself; interactive mode. Don't get this wrong. Interactive does not mean that your PC will cough politely and ask whether you actually have any grasp of your mother tongue. Nope, it simply brings messages up on the screen which explain just why you made those stupid mistakes. The sentence I have just used would call-up authoritative statements as to why an infinitive should never be split. According to gurus Fowler and Eric Partridge in *Useage and Abusage* the separation of 'to' from its infinitive isn't the heinous crime that many

would have you believe. *Grammatik* takes it lead from just such stars of the linguistic universe and can be quite flexible on subjects such as split. When it comes to dropping the possessive from 'toytown's' however, there is no way out, you are just plain wrong and are told as much.

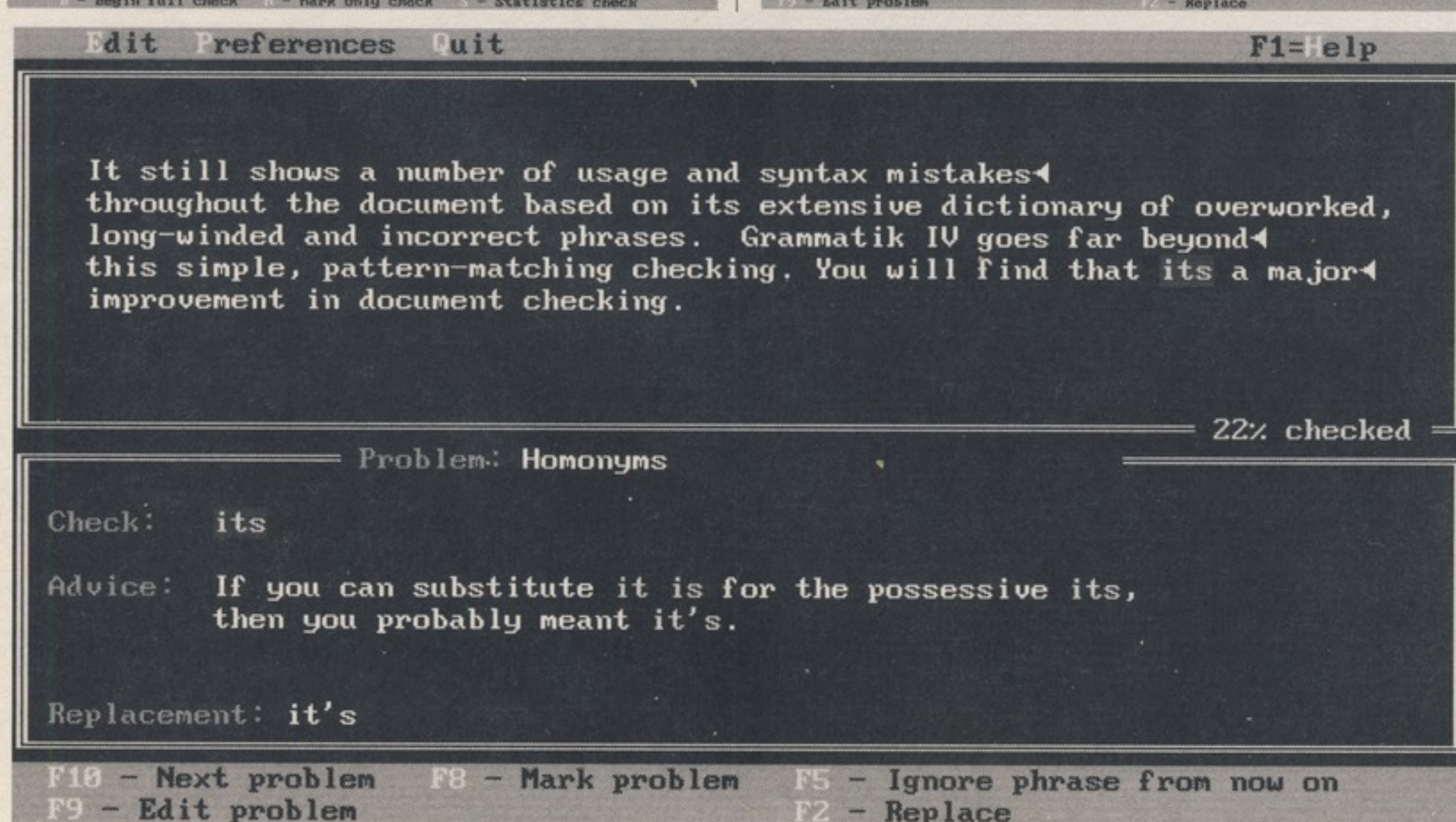
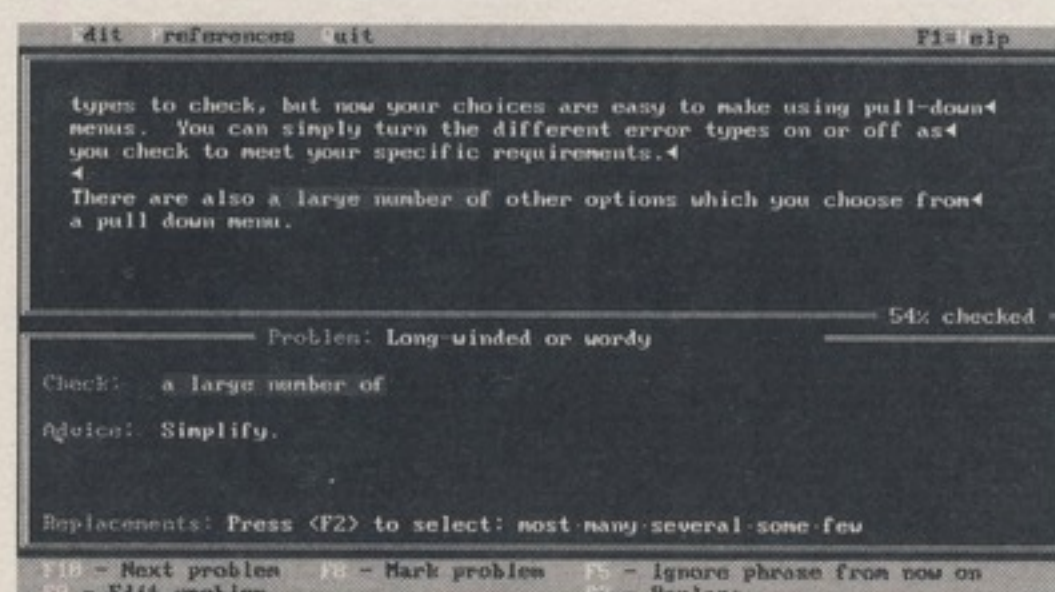
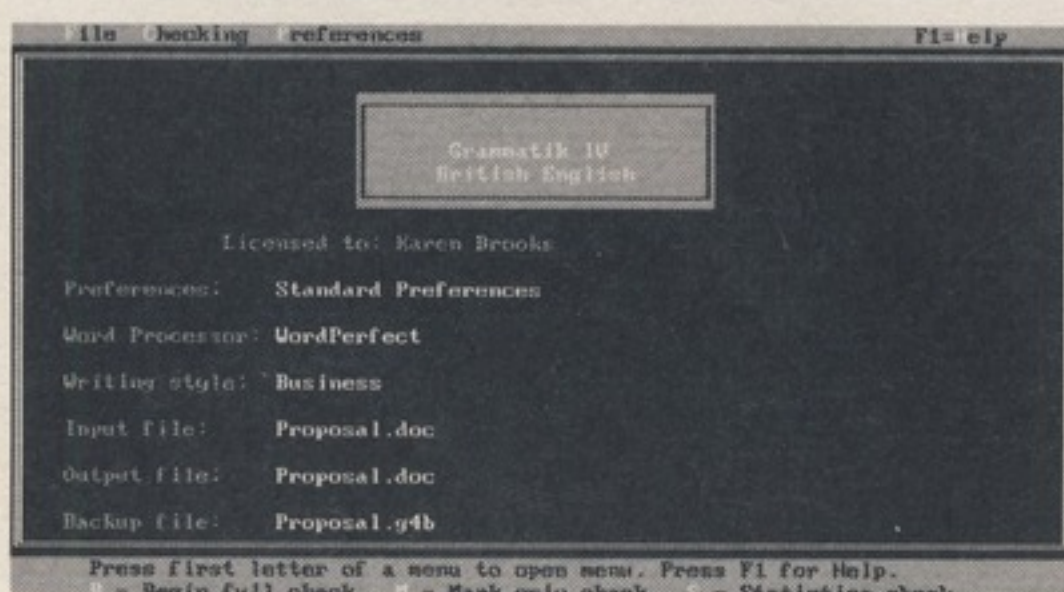
Well, that would be the case if it weren't for the Rule Editor which comes with the system. This is handy as heck for anyone who has to write in more than one style regularly - and face it, that's most of us. After all you wouldn't write to your lover in the same way as you would write to the local council's Poll Tax (sorry Community Charge) office would you? And I certainly wouldn't write a news feature for *Express* in the same way as my column for *The Times* (the Twyford Times).

The Rules Editor will allow you to have certain laws turned on or off from the main checking routine. But more importantly it allows you the chance to create your own default systems and guidelines which can over-ride its own. An excellent practical useage of this in the *Express* office, for example, is in the case of company names and their case. The cry goes up again and again that companies are singular; *Mirrorsoft has* gone to the pub, *Amstrad is* about the release a new Cray clone, and so on. It is simply a matter of setting up this rule within the system, with a few examples and you're away. Be very careful with this.

Problems do arise with what is basically an excellent program once your piece of text has been given the once over. Any comments which were made by *Grammatik* remain embedded in the text and have to be hoiked out by you. Interactive mode, although exceedingly useful, is also rather slow. This lack of speed owes much to the freeing up the F1 key which calls up the explanatory notes. Sacrificing speed for style is the assumption here.

Aside from these quibbles, even a rabid anti-software interventionist person like myself really quite enjoyed using *Grammatik*. Unlike much software which begins to take over - see spell-checkers which use those horrible 'ize endings to words so often that you just think "to hell with it" and finish up by using them just to save you time - this style checker is actually helpful to its user. The addition of the editing facility, be careful with this as it is easy to get carried away with, serves only to make life even easier, even more easy, more easier? Hell, I don't know! Where's the checker gone. ■

*Grammatik IV* Cost £115 from Roalon International  
Contact: 0202 861512



• Pressing {F1} whenever *Grammatik IV* detects what it believes to be an error brings up explanations and examples



# THE ATARI ABC

Now, there's a PC-AT compatible that not only solves problems like other AT compatibles, it also solves the one problem that its predecessors have created ... affordability.

Silica Systems are pleased to present the new Atari ABC. The ABC is a 286 AT compatible that runs at over 5 times the performance of the IBM XT. This is achieved by combining the power and speed of a 16-bit 286 processor, with Atari Corp's development experience and engineering capabilities, which use the very latest in design technology. However, the Atari ABC's are available at 'XT prices' and many XT owners will wonder why they paid more, but got less!

The ABC is a reliable, high performance computer, built to exceptionally rigorous standards. It is well designed, to a state of the art specification, maintaining maximum expansion capability for the future. This includes up to 4Mb of RAM and 3 AT expansion slots. Plus, unusually for a PC at this price, the ABC has the ability to install two or three extra drives, with the cabling already inside the CPU.

The ABC has a host of impressive features, all built-in as standard, encouraging simple installation and ease of use. In addition, the ABC's small footprint and quiet operating, mean that you will notice it less on your desk than other PC's. Except, of course, when you begin to take advantage of its AT power.

At its remarkably low price point, the ABC is ideally suited for home, office and educational use and will take full advantage of the vast range of PC compatible software. And, with 12 months FREE on-site maintenance (8 hour response), you can rest assured that your ABC will be fully supported.

The ABC is the latest addition to a comprehensive range of both 286 (8Mhz or 12Mhz) and 386 (16Mhz and 20Mhz) PC's, from the Business Systems Division of Atari Corp. Atari's PC range offers an unsurpassed combination of reliability, compatibility and expandability, with unique features like Atari's 44Mb removable hard disk on their PC4. Return the coupon NOW for further details of the complete range of PC products from Atari's Business Systems Division.

**ABC  
TURBO**  
AVAILABLE: JUNE 90

To put the ABC even further ahead of the competition, we have introduced a special 'Turbo' version, which includes a super fast RLL hard disk controller to increase the data transfer rate from 150KBytes/s to 800KBytes/s, with a performance index of 4.801. Plus! to provide exceptional graphics with an outstanding colour resolution of up to 1024x768, we have included a Super VGA graphics adaptor and a 14" VGA colour monitor (which also supports 1024x768 resolution), all for an additional price of only £300. Check the ABC Turbo against the competition, at only £1299 (+VAT) with 30Mb hard disk, Super VGA colour graphics capabilities, plus 12 months on-site maintenance, it offers unbeatable value.

## LOW PRICE - HIGH SPEC!

<b>CPU+MOTHERBOARD</b>	<ul style="list-style-type: none"> <li>8Mhz 80286 16-bit CPU</li> <li>Landmark Speed = 10.3Mhz, Norton SI Test = 9.0</li> <li>Latest NEAT (New Enhanced AT) technology chip set</li> <li>Has user selectable bus, DMA speeds &amp; wait states</li> <li>Programmable to operate at 0 or 1 wait states</li> <li>640K RAM base memory (expandable)</li> <li>Motherboard expandable to 4Mb RAM memory</li> <li>Real time clock with battery back-up</li> <li>Full 16-bit data line capability</li> <li>Socket for 80287-8 numeric Co-Processor</li> <li>3 16-bit AT expansion slots (max)</li> </ul>
<b>DISK</b>	<ul style="list-style-type: none"> <li>32Mb RLL hard disk - 150KBytes/s transfer - 60ms access</li> <li>Fast disk controller - 800KBytes/s transfer - Turbo version</li> <li>1.44Mb built-in 3 1/2" floppy disk drive</li> <li>Space for two 5 1/4" and two 3 1/2" drives (max)</li> </ul>
<b>I/O</b>	<ul style="list-style-type: none"> <li>Parallel port built-in (25-pin Centronics)</li> <li>Serial port built-in (9-pin RS-232)</li> <li>Mouse controller port built-in (9-pin serial)</li> </ul>
<b>GRAPHICS</b>	<ul style="list-style-type: none"> <li>Super VGA video graphics controller - 512K - Turbo vers</li> <li>Super VGA: 256 colours in 800x600 res - Turbo vers</li> <li>EGA video graphics controller built-in</li> <li>EGA: 16 colours available from a palette of 64</li> <li>EGA: 256K of dedicated Video RAM built-in</li> <li>MDA, CGA and Hercules graphics controller built-in</li> </ul>
<b>PHYSICAL</b>	<ul style="list-style-type: none"> <li>Low noise operation</li> <li>Ergonomic small footprint (38cmx41cmx15cm)</li> <li>Keyboard - 102 key enhanced AT (12 function keys)</li> <li>Keyboard - has 2 position height adjusters</li> </ul>
<b>PLUS!</b>	<ul style="list-style-type: none"> <li>Fully OS/2 compatible (requires 4Mb RAM)</li> <li>Supports Industry Standard Networks</li> <li>MS-DOS 3.3 with GW BASIC 3.22</li> <li>12 Months FREE on-site maintenance included</li> </ul>

# 286 AT

WITH 30Mb HARD DISK & EGA MONITOR - £899

**FREE! - ON-SITE MAINTENANCE**

**FREE! - TECHNICAL SUPPORT HOTLINE**

**FREE! - TEST/BURN-IN BEFORE DESPATCH**

**FREE! - OVERNIGHT COURIER DELIVERY**

**£899**  
WITH +VAT  
**30Mb  
HARD  
DISK**  
AND  
**EGA  
MONITOR**



**ABC  
TURBO  
£1299** EXC VAT  
 • SVGA COLOUR MONITOR  
 • SVGA GRAPHICS CARD - 512K  
 • 30Mb HARD DISK DRIVE  
 • FAST DISK CONTROLLER

# £899

+VAT= £1033.85

**ATARI**

	3 1/2" FLOPPY DRIVE NO HARD DRIVE	3 1/2" FLOPPY DRIVE + 30Mb HARD DRIVE
<b>NO MONITOR</b>	<b>£599</b> +VAT = £688.85	<b>£799</b> +VAT = £918.85
<b>+ EGA MONO</b>	<b>£699</b> +VAT = £803.85	<b>£899</b> +VAT = £1033.85
<b>+ EGA COLOUR</b>	<b>£799</b> +VAT = £918.85	<b>£999</b> +VAT = £1148.85
<b>ABC TURBO</b> AVAIL: JUNE 90	<b>£1099</b> +VAT = £1263.85 • 14" SVGA COLOUR MONITOR • SVGA GRAPHICS ADAPTOR • FAST DISK CONTROLLER	<b>£1299</b> +VAT = £1493.85

## SILICA SYSTEMS OFFER YOU

**ON-SITE MAINTENANCE (8 hour response):** Available Free of Charge on all ABC's.  
**TECHNICAL SUPPORT HELPLINE:** Team of Atari technical experts at your service.  
**100% QUALITY CONTROL:** Every ABC is tested/burnt-in before despatch.  
**FREE OVERNIGHT COURIER DELIVERY:** On all hardware orders shipped in the UK.  
**ESTABLISHED 12 YEARS:** Proven track record in professional computer sales.  
**£13m TURNOVER (with 60 staff):** Solid and reliable with maintained growth.  
**BUSINESS/EDUCATION/GOVERNMENT:** Volume discounts available for large orders.  
**PRICE MATCH:** We normally match competitors on a "Same product - Same price" basis.  
**SHOWROOMS:** Demonstration and training facilities at our London & Sidcup branches.  
**THE FULL STOCK RANGE:** All of your Atari PC requirements from one supplier.  
**FREE CATALOGUES:** Will be mailed to you with offers and software/peripheral details.  
**PAYMENT:** Cash / cheque / credit card / credit - we are licensed credit brokers - details on request.

Before you decide when to buy your new Atari ABC, we suggest you think very carefully about WHERE you buy it. Consider what it will be like a few months after buying your ABC, when you may require additional peripherals or software, or help and advice with your new purchase. And, will the company you buy from contact you with details of new ABC products? At Silica Systems, we ensure that you will have nothing to worry about. Silica Systems is a new division of Silica Shop, the UK's leading Atari specialists. This new division has been established to provide a service to the more serious home user, as well as to business and education purchasers. Silica have been established for over 12 years, and have an annual turnover of £13 million. With our unrivalled experience and expertise, we can now claim to meet our customers requirements with an understanding which is second to none. But don't just take our word for it. Complete and return the coupon now, for our latest Free literature and begin to experience the "Silica Systems Service".

**SILICA  
SYSTEMS**

**MAIL ORDER:** 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX Tel: 081-309 1111  
 Order Lines Open: Mon-Sat 9.00am-6.00pm No Late Night Opening Fax No: 081-308 0608

**LONDON SHOP:** 52 Tottenham Court Road, London, W1P 0BA Tel: 071-580 4000  
 Opening Hours: Mon-Sat 9.30am-6.00pm Late Night: Thursday until 8pm Fax No: 071-323 4737

**SIDCUP SHOP:** 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX Tel: 081-302 8811  
 Opening Hours: Mon-Sat 9.00am-5.30pm Late Night: Friday until 7pm Fax No: 081-309 0017

**BUSINESS/EDUCATION:** 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX Tel: 081-308 0888  
 Order Lines Open: Mon-Fri 9.00am-6.00pm Closed on Saturdays Fax No: 081-308 0608

To: Silica Systems Ltd, Dept NCE-1090-28, 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX

**PLEASE SEND INFORMATION ON ATARI PC's**

Mr/Mrs/Ms: ..... Initials: ..... Surname: .....

Address: .....

Postcode: .....

Tel (Home): ..... Tel (Work): .....

Company Name: .....

Which computer(s), if any, do you own? .....

E&OE - Advertised prices and specifications may change - please return the coupon for the latest information.



## DISKS DISKS DISKS DISKS DISKS

## SPECIAL OFFERS LIMITED PERIOD ONLY

## GENUINE 100% CERTIFIED SONY DISKS

QUANTITY	10	25	50	100
3 1/2" DS/DD 135tpi	45p	44p	43p	41p

3 1/2" Coloured DS/HD 2mb SPECIAL OFFER 80p each  
(minimum quantity 10 disks)

3 1/2" DS/DD 135tpi COLOURED DISKS 45p each  
(minimum quantity 10 disks)

## BANX BOXES

Lockable stackable 3 1/2" storage boxes holds over 70 disks  
£9.50 each. £8.00 each for two or more boxes

## SPECIAL UNREPEATABLE LIMITED OFFER

5 1/4" grey library case holds 10 disks - 60p each

All the above disks come with labels V.A.T included. Please add £2.50 postage & packaging £10.00 next day delivery (UK only). To take advantage of the above special offers call our **HOTLINE** now on **0784 451011** DON'T DELAY, OFFER ONLY AVAILABLE WHILE STOCKS LAST. When ordering by phone please quote NCE/MV or post your order with cheque/PO to:

MediaVALUE,  
NORTHUMBERLAND  
HOUSE, DEPT NCE/MV,  
DRAKE AVE, STAINES,  
MIDDLESEX TW18 2AP.  
TEL NO **0784 466744** FAX NO **0784 450845** E & O.E

**WE OFFER A NO QUIBBLE  
REPLACEMENT OR MONEY  
BACK GUARANTEE**

VISA

PD & SHAREWARE  
who do you get yours from?

There are many PD libraries around but do they offer you....

- ★ Huge collection, thousands of programs on over 3000 disks
- ★ Same day service - 1st Class post - GUARANTEED
- ★ Knowledgeable staff on hand (no 'phone after six and ask for fred'!)
- ★ Three years experience collecting and distributing PD & Shareware to satisfied customers all over the world.
- ★ FREE 30 page catalogue, S.A.E (35p stamp) and state MAKE of computer CLEARLY and we'll rush one to you by return.

## AMIGA

Currently over 800 disks in our catalogue, including Fred Fish, APDC, AMICUS, Panorama etc. Our own SOF collection is so good other libraries stock them now and of course we are exclusive distributors of the fabulous UGA disks. All are auto-boot, menu driven and so very easy to use, probably the best collection available! We also run an Amiga Club, ask for details.

## ATARI ST

We currently stock over 800 disks full of PD/Shareware for these machines, containing every imaginable type of program! Choose from ALL the Public Domain, not just "a selection". If you are new to ST'ing why not join "Clubville", our popular user group, £6.50 gets you newsheets, offers, special prices on goods, 5% Off blanks/PD etc.

## IBM PC

(and compatibles)

Thousands of the most popular Public domain and Shareware programs in our current catalogue, all available on either 3.5" or 5.25" format, if ordering (opposite) state which. Whatever type of program you may require, we've probably got it.

MEGA PACK - £19.50 (£14.50)  
5 PD disks + 5 blank disks

plus a Library case

(Selection of current popular titles),  
INTRO DISK - £1.50

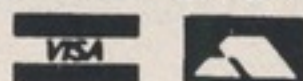
(Atari or Amiga only)

VIRUS KILLER DISK - £1.50  
(state machine clearly)

(prices in brackets for 5.25" disks, state preference)

24 Hour orderline on

**0705-266509**



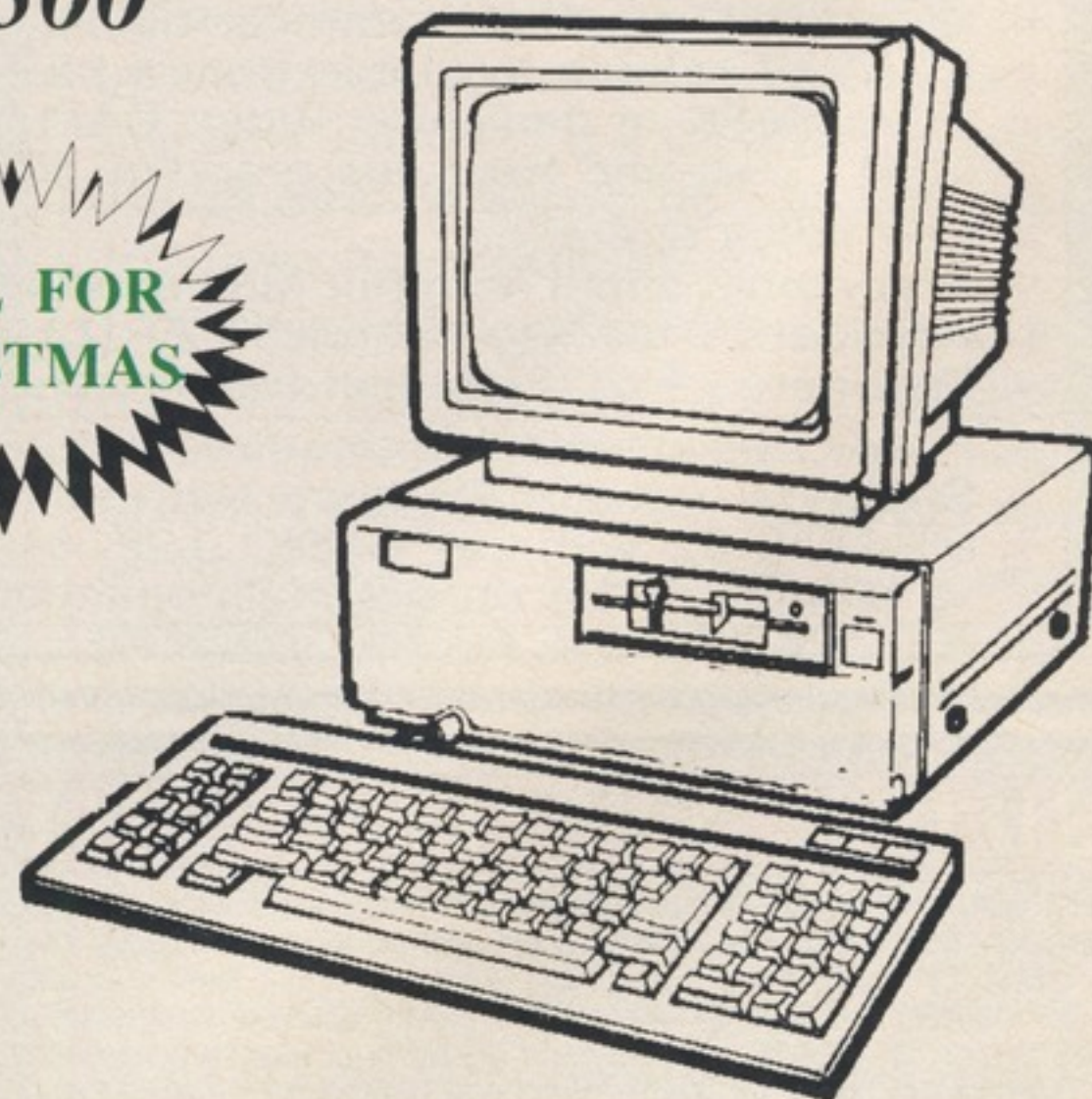
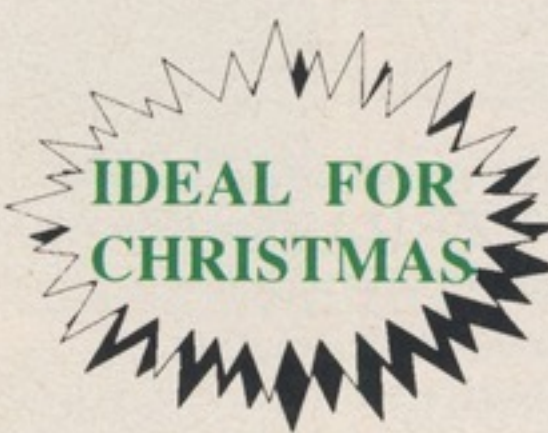
## SOFTVILLE

Unit 5, Stratfield Park,  
Electra Avenue, Waterlooville,  
Hants. PO7 7XN

## MAJOR STOCK CLEARANCE

## IBM PC/XT COMPATIBLE FOR UNDER £300

- \* 8088 Processor running at 8MHz
- \* 1/2 Mb On-Board RAM (Expandable)
- \* 1X360k 5.25" FDD (Room for second disk drive)
- \* Maths Co-Processor socket
- \* Mono/Colour Graphics Card
- \* 2 Conventional Expansion slots
- \* Room for 3.5" Hard Disk(Standard SEAGATE etc.)
- \* Fully Expandable at any time
- \* MS-DOS 3.3 & GW-BASIC 3.2
- \* 102 key keyboard made by EPSON
- \* 12" Mono Monitor (New/Ex-Display)
- \* Full UK Specification
- \* Battery Back-Up.



**£299.95p**  
inc. VAT & Carriage

Made by a Famous Korean manufacturer to the highest specification. Ideal for Students, Business, Hobbyists, Home Word-processing, Amateur Radio, etc.. At our price of £299.95p fully inclusive, this is better value than buying a PC Emulator for your existing computer. The Perfect Present for Christmas. ORDER TODAY by simply picking up the telephone.

Access

VISA/ACCESS orders welcome. Prices subject to change without notice. All transactions are subject to our standard conditions of Sale available upon request. Personal callers welcome by appointment. All prices include VAT.

VISA

## UK HOME COMPUTERS

82 Churchward Ave., Swindon, Wilts. SN2 1NH.  
Tel: (0793) 695034 FAX: (0793) 541691



RETURN THE COUPON FOR FREE COLOUR BROCHURES!

# NEW! - AMIGA PACK

Commodore A500  
Flight Of Fantasy

£399

INC VAT



## A500 BATMAN PACK



The Commodore A500 Batman Pack must surely rank as one of the most popular computer packs ever! The pack features the Commodore Amiga 500 computer with mouse controller and TV modulator, plus four top software titles. The software includes: 'Batman The Movie' - Rid Gotham City of the cunning joker, in Ocean's top selling title based on the blockbuster Batman film; New Zealand Story - high quality conversion of the leading arcade game; Interceptor - Dogfight with two F-16's in this leading flight simulator; Deluxe Paint II - top quality Amiga graphics package which set the standard for others to follow. Return the coupon for further details.

### PACK INCLUDES:

A500 Computer & Mouse	£399.99
A520 TV Modulator	£24.99
Batman The Movie	£24.95
New Zealand Story	£24.95
Interceptor	£24.95
Deluxe Paint II	£49.95

TOTAL RRP: £549.78

Less Pack Saving: £150.78

PACK PRICE: £399.00

£399 INC VAT

## AMIGA 2000



For the more serious or professional applications user, Commodore have a selection of systems based around the expandable Amiga 2000, at prices from £1295+VAT. The A2000 features a full 1Mb RAM (expandable to 9Mb), 9 system expansion slots, plus IBM compatibility with the use of PC-XT or PC-AT bridgeboards. Complete and return the coupon, putting a tick in the A2000 box, for details of A2000 computer systems.

£1295 +VAT= £1489.25

## FLIGHT OF FANTASY

Flight of Fantasy is the very latest Amiga 500 pack from Commodore, featuring BRAND NEW software releases, to make this the most spectacular A500 pack ever! The pack features the Amiga 500 computer with mouse controller and TV modulator, as well as four top software titles. These include the following:

### DELUXE PAINT II:

The high quality graphics program that set the standard for other Amiga art packages. Deluxe Paint II includes powerful, easy to use tools that bring out the artist in you. Create masterpieces, presentations, 3D perspectives or just doodle.

### ESCAPE / ROBOT MONSTERS:

Here's something completely different - a science fiction story with comic book style graphics. Our heroes Jake and Duke are on the Planet X rescuing Humans who have been captured by the Robot Monsters and forced to create an evil Robot Army to DESTROY EARTH! Jake and Duke fight their way through hordes of evil Robots to help the Humans escape.

### RAINBOW ISLANDS:

Slip on your magic shoes, practise throwing a rainbow and you're ready to go island hopping. From the Island of Doh to Monster Island, you will encounter Doh himself, stinging insects, lethal combat machines, mechanical assailants, the formidable beings of legend and folklore. Finally enter the world of darkness and its inhabitants.

### F29 RETALIATOR:

The ultimate in flight simulation with a choice of two aircraft and four battle environments with dozens of different tactical missions. Aerial combat, strategic bombings, interactive ground based battles, seagoing carriers ... the list of features is endless. Real time cockpit displays, including 'true radar' enhance the realistic feel of this stunning simulation.

### PACK INCLUDES:

A500 Computer & Mouse	£399.99
A520 TV Modulator	£24.99
Deluxe Paint II	£49.95
Escape/Robot Monsters	£19.99
Rainbow Islands	£24.95
F29 Retaliator	£24.95

TOTAL RRP: £544.82

Less Pack Saving: £145.82

PACK PRICE: £399.00

£399 INC VAT

FOR FURTHER DETAILS OF THE AMIGA RANGE, COMPLETE THE COUPON AND RETURN IT TO SILICA SHOP  
THE UK's No1 AMIGA SPECIALISTS

## SILICA SHOP OFFER YOU

**FREE OVERNIGHT COURIER DELIVERY:** On all hardware orders shipped in the UK.  
**TECHNICAL SUPPORT HELPLINE:** Team of Amiga technical experts at your service.  
**PRICE MATCH:** We normally match competitors on a "Same product - Same price" basis.  
**ESTABLISHED 12 YEARS:** Proven track record in professional computer sales.  
**£13M TURNOVER (with 60 staff):** Solid and reliable with maintained growth.  
**BUSINESS/EDUCATION/GOVERNMENT:** Volume discounts available for large orders.  
**SHOWROOMS:** Demonstration and training facilities at our London & Sidcup branches.  
**THE FULL STOCK RANGE:** All of your Amiga requirements from one supplier.  
**FREE CATALOGUES:** Will be mailed to you with offers and software/peripheral details.  
**PAYMENT:** By cash, cheque and all major credit cards.  
**CREDIT PAYMENT TERMS:** Silica are licensed credit brokers - return coupon for details.

Before you decide when to buy your new Amiga computer, we suggest you think very carefully about WHERE you buy it. Consider what it will be like a few months after buying your Amiga, when you may require additional peripherals or software, or help and advice with your new purchase. And, will the company you buy from contact you with details of new products? At Silica Shop, we ensure that you will have nothing to worry about. Silica have been established for over 12 years, and have an annual turnover of £13 million. With our unrivalled experience and expertise, we can now claim to meet our customers requirements with an understanding which is second to none. But don't just take our word for it. Complete and return the coupon now for our latest Free literature and begin to experience the "Silica Shop Service".

RETURN THE COUPON NOW FOR  
FREE BROCHURES

SILICA  
SHOP



**MAIL ORDER:** 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX Tel: 081-309 1111  
Order Lines Open: Mon-Sat 9.00am-6.00pm No Late Night Opening Fax No: 081-308 0608

**LONDON SHOP:** 52 Tottenham Court Road, London, W1P 0BA Tel: 071-580 4000  
Opening Hours: Mon-Sat 9.30am-6.00pm Late Night: Thursday until 8pm Fax No: 071-323 4737

**SIDCUP SHOP:** 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX Tel: 081-302 8811  
Opening Hours: Mon-Sat 9.00am-5.30pm Late Night: Friday until 7pm Fax No: 081-309 0017

**BUSINESS/EDUCATION:** 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX Tel: 081-308 0888  
Order Lines Open: Mon-Fri 9.00am-6.00pm Closed on Saturdays Fax No: 081-308 0608

To: Silica Systems Ltd, Dept NCE-1090-32, 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX

PLEASE SEND INFORMATION ON THE AMIGA

Mr/Mrs/Ms: ..... Initials: ..... Surname: .....

Address: .....

Postcode: ..... Tel: .....

Which computer(s), if any, do you own? ..... A2000 ☐

£&OE - Advertised prices and specifications may change - please return the coupon for the latest information.



# COMPETITION

LASER PRINTER

WIN **£2,000** OF  
PANASONIC LASER PRINTER  
IN THE **EXPRESS** MONTHLY  
GIVEAWAY



The Express monthly competition to win a £2,000 Panasonic laser printer rolls on. This is the next question on the list. Don't forget to keep the token safe for the end of the month.

# WIN! WIN! WIN!



QUESTION 3:

What is the nickname of the superfast Japanese train?

- A) Trigger
- B) Missile
- C) Bullet

## WINNERS

The winners of the James Pond competition we ran a few issue ago are as follows:

Chris Pearn, Macclesfield, Cheshire.  
Gregor Houghton, Fratton, Pompey.  
Mrs S J Head, Coulsdon, Surrey.  
P J Greenwood, Blackburn, Lancs.  
David Plater, Bridport, Dorset.  
S May, Deighton, Huddersfield.  
Stephen Smith, Bridgeford, Notts.  
Douglas O'Hare, Brighouse, W Yorks.  
S Lorraine-Francis, Hartcliffe, Bristol.  
M Westall, Poole, Dorset.  
Spiffingly well done.

## WIN THE NEWEST JOYSTICK ON THE STREETS! £499.80 WORTH OF JIGGLING POWER TO BE WON! **EXPRESS** HAS 20 TO GIVE AWAY!

I've been doing these competitions for some time now, and yet have never made any introductions. The name is Ms Hanks and I double as the coffee machine operative for the *Express* staff. You may have read about me in those Centrefold pages. It is my arduous task to have to give things away every week; week in, week out.

This time around I have 20 Spectravideo Mega Board joysticks; and no I don't have one of my own. These things work with any machine you care to mention, well except the PC or a Cray. Each Mega Board comes with two stop watches both of which can count up and down, all the easier to time yourself and your

friends with. You can also vary the autofire speed, all the better to batter the enemy with, not that battering people is a very good idea in my opinion.

The joysticks are due for release in the very near future, but you could be the first person in your conurbation to have one.

All you have to do to win one is answer the following five questions. Send your answers on the coupon to me at the Sheer Joy Competition, *New Computer Express*, 30 Monmouth Street, Bath, Avon BA1 2BW. Entries to be in by Monday November 12 1990. Coupons should be stuck on the back of a postcard or a sealed envelope.

### QUESTIONS

- 1) Where did the band Joy Division originate?  
A) Leningrad  
B) Toytown  
C) Manchester
- 2) Which game was played by a bear of little brain?  
A) Yogi sticks  
B) Pooh sticks  
C) Goldilocks sticks (?)
- 3) Which famous comedienne was known to say "George... don't do that"?  
A) Joyce Sims  
B) Joan Sims  
C) Joyce Grenfel
- 4) A phrase among the criminal fraternity is . . .  
A) You'll never take me to Rhyl copper  
B) Look Ma I'm on top of the pops!  
C) Stick 'em up
- 5) With which piece of software would you NOT use a joystick?  
A) Lotus 1-2-3  
B) Kick Off  
C) Xenon II

There we go. Simply fill in the coupon and send in your answers; and jolly good luck to you all.

NAME.....

ADDRESS.....

The answers are: 1)                      2)                      3)                      4)                      5)

Supplementary question for the mystery prize...

"Chaos Theory is fatally flawed because.....

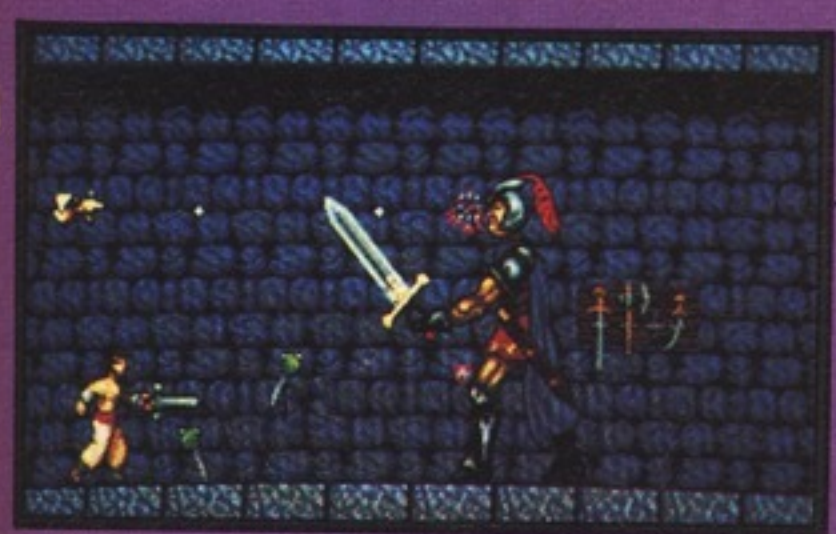
..... (no more than five words).



# Death Trap



CBUXTON



A trap so deadly that it has remained inviolate for five centuries, so ingenious that it gently lures an intruder to a certain death, a trap worthy of Shankriya, the magician king, a tyrant and absolute ruler of vast lands. The trap is set in a multi level labyrinth deep in the bowles of the earth and populated by creatures vile, vicious and venomous. Within it lay hidden the magic scrolls, source of Shankriya's power. Only a very brave man, dexterous, with exquisite sense of timing, versed in martial arts and a flair for mixing potent magic potions, can ever hope to survive the infamous DEATH TRAP.

AMIGA & ST £24.99

ANCO SOFTWARE, UNIT 10, BURNHAM TRADING ESTATE,  
LAWSON ROAD, DARTFORD, KENT.  
TELEPHONE No: 0322 92513/92518 FAX No: 0322 93422

ANCO



# Clive Barker's UNNIGHTED FIBREED

C  
A  
D  
A  
L

T H E A C T I O N G A M E

## THE



TAKE CONTROL OF BOONE AS HE MAKES HIS WAY THROUGH THE DEPTHS AND CAVERNS OF NECROPOLIS TO

## HAS

THE UNDERGROUND CITY OF MIDIAN WHERE DWELL THE NIGHTBREED. SUPERNATURAL CREATURES WHO HAVE SHIELDED THEMSELVES FROM



THE INHUMANITIES OF MAN. NOT ONLY MUST YOU CONFRONT AND DEFEAT THESE CREATURES BUT



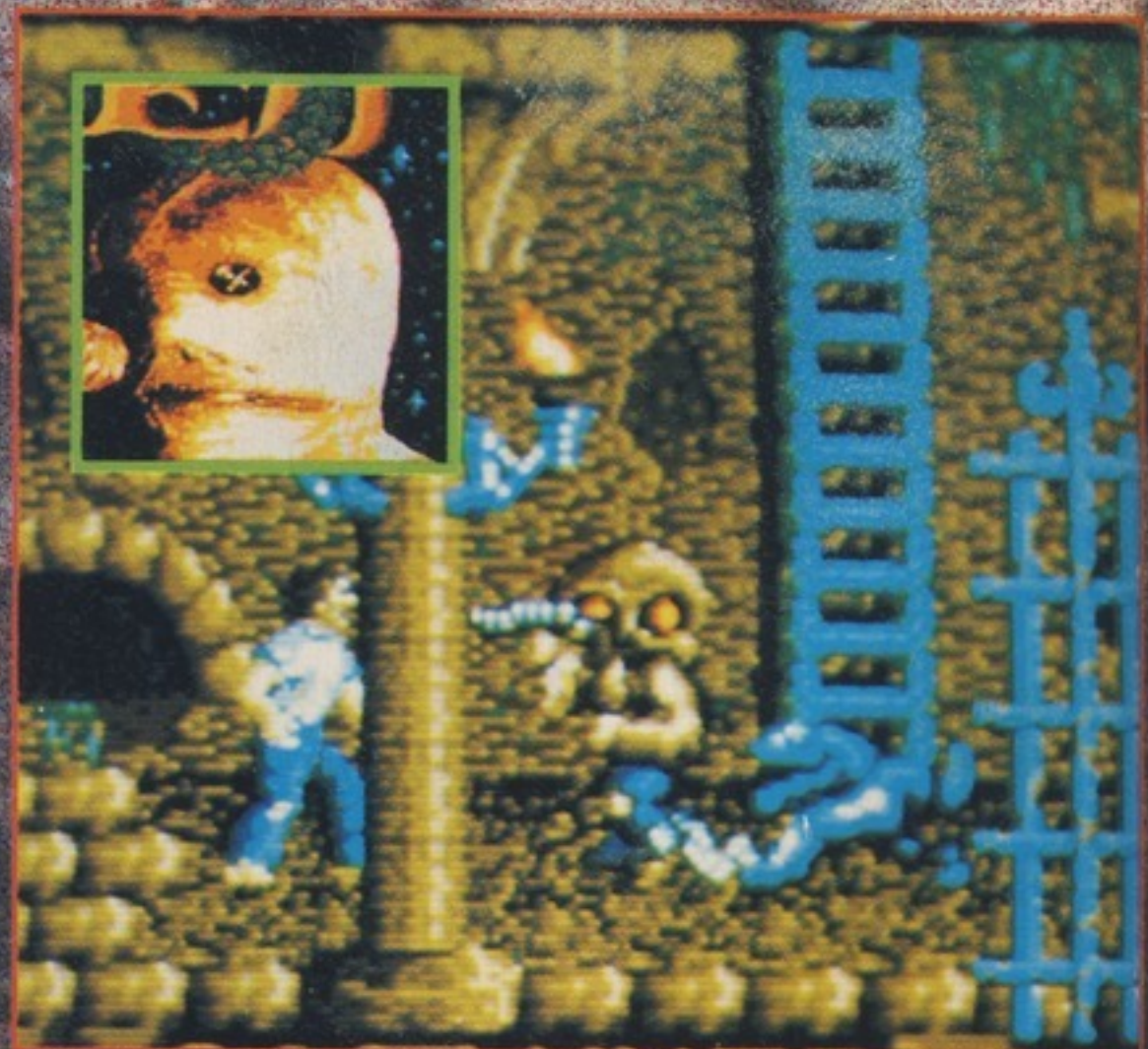
© 1989 MORGAN CREEK PRODUCTIONS. ALL RIGHTS RESERVED.  
COPYRIGHT © CLIVE BARKER 1988.

AVAILABLE FOR COMMODORE  
SPECTRUM - AMSTRAD  
ATARI ST AND CBM AMIGA.

**ocean**

## NIGHTMARE

YOU MUST PIT YOURSELF AGAINST THE MURDEROUS REDNECK GANG FROM THE NEARBY ABOVE-GROUND CITY AND ULTIMATELY DEFEAT THE INSANE SERIAL KILLER KNOWN AS "THE MASK"



## BEGUN!

THIS ALL-ACTION ARCADE ADVENTURE ALLOWS YOU TO SHOOT, PUNCH AND JUMP AS YOU EXPLORE THE TERRIFYING UNDERGROUND ENVIRONMENT OF THE NIGHTBREED.

## THEY'RE COMING SOON!!!